American Aviation

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EQUIPMENT

JAN. 19
1953

35 cents

AIRTRENDS

Fifty-eight per cent of the total Defense Department's 1954 budget involving major procurement and production items will go for purchases of aircraft. About $8.2 billion of the $14.2 billion asked for procurement is destined for military plane manufacturers.

•

Prime contracts in the missile field are now held by 44 major industrial and scientific organizations, including 17 airframe manufacturers and five engine plants, according to the Aircraft Industries Association.

•

Consolidation of many Defense agencies and boards is expected when the Eisenhower administration takes over. Overlapping functions of the Munitions Board, ODM, DPA, NSRB, and the Defense Department itself make the step inevitable.

•

$71 million in airline subsidies, or slightly more than half of the total air mail payments, is projected for the next fiscal year according to the President's budget requests.

•

An "Expedited Mail" proposal, under which the charge for all first-class mail would be 5¢ per ounce, with all letters traveling over a certain distance going by air, is getting some attention at the Air Transport Association, but is unlikely during this session of Congress barring a complete overhaul of postage rates.

•

Unfamiliarity with aviation problems may temper the quick and complete take-over of civil aviation by top Commerce Department officials of the new Administration.

•

Milestones in the USAF buildup to 143 wings, scheduled for attainment by December, 1955, includes 106 wings by July of this year and 133 wings in July, 1954.

•

Shortage of high octane aviation fuel will continue for another 12-18 months, according to top Defense officials. Although refineries could process another million barrels of crude oil a day, production capacity is inadequate for wartime needs.

•

Twenty-four wage approval cases involving air carriers were pending with the Railroad and Airline Wage Board at year's end, compared to 41 in October, 1951, when the RAWB started operations; 339 of 376 airline wage cases were processed in 1952.

•

U. S. demonstration tour for the Fokker S-14 jet trainer, Fairchild sponsored and originally scheduled for last month, may be cancelled as a result of the Cessna Model 318 winning the USAF trainer competition.

•

Change of control of a major aircraft manufacturing company, involving one of the biggest deals in years, is a strong likelihood for the early part of 1953.

The Washington View

Fewer Chiefs, More Indians

The number of generals in the Air Force is going to have to be reduced before long. The Pentagon says the USAF now has no five-star wearers, seven generals, 19 lieutenant generals, 135 major generals, and 220 brigadiers.

But the new budget proposal indicates that from now on the number of generals will be determined by overall strength of the USAF, i.e., four-star generals will be limited to .00055% of all USAF airmen; lieutenant generals to .00175%; major generals to .0111% and brigadier generals to .0192%. No five-star generals are authorized for the USAF.

This means that on the basis of present strength (nearly 1,000,000 men), six men may wear four stars, 18 may wear three; 111 two, and 192 may be brigadiers. USAF's proposed average strength of 1,047,000 for fiscal 1954 will not change these maximums by very much (five more major generals and 10 more brigadiers)—still less than at present. USAF officials indicate expected retirements will bring them down to authorized limits.

Munitions Board: Going, Going . . .

It's a safe bet that the Defense Department's Munitions Board will go out of existence very soon. The incoming top men in the defense set-up, C. E. Wilson, Roger Kyes and others, are said to feel that the MB has duplicated the work of several other agencies. Now the outgoing Defense Secretary, Robert A. Lovett, has gone on record in favor of abolishing the Board.

Lovett made the recommendation to President Truman shortly after the November election, pointing out that three of the MB's four members are representatives of the Army, Navy and Air Force and consequently sit in judgment on the individual services' requests for materials and other allocations. He said that the present system would probably not work in a full mobilization, when the Board would have to divide up the supply of available materials and each service would be clamoring for its full share. Lovett's proposal came to light after he testified before the House Armed Services Committee.

He suggested that the MB be replaced by an Assistant Secretary of Defense for Supply, who would choose his own Munitions Advisory Board by drawing men from engineering, industry, science, and general business.

The outgoing Defense Secretary also proposed that the job of the Joint Chiefs of Staff be re-aligned so that the heads of each branch would be responsible only for strategic planning and the vice chiefs would handle administrative tasks. JCS chairman, now forbidden to vote on controversial proposals, would get such a right under Lovett's plan.

Congress Waits to See

A fast start was made by the 83d Congress with the picking of its party leaders going according to plan. Things then settled down to the urgent matter of getting organized for its two years and undertaking the task of making the all-important committee assignments.

For the first time in more than 20 years, Republicans are simultaneously in control of both houses of Congress and the presidency, and the change has created considerable interest. However, in the first two weeks of this session, the prevailing attitude on Capitol Hill has been one of "let's wait and see" before getting anything major under way.

The waiting is for the new administration's legislative program. Although legislative proposals were dropped into the hoppers of both houses by the hundreds, there was no prospect of any major legislation until the Eisenhower program has been received and studied. What the incoming administration wants in the way of legislation is expected to be outlined shortly after the inauguration on January 20. Consequently, returning members of Congress were extremely cautious in making any predictions on aviation legislation or investigations.

One Job at a Time

One proviso in the budget message submitted by President Truman last week may cause some concern among retired generals and admirals now on the payrolls of aircraft companies. Within the past few years, many officers with 30 years of service have gotten out and taken sales and other positions in defense industry.

The provision in the 1954 budget says that no money will be paid for two years to any retired officer who is engaged in selling to or negotiating sales with the Defense Department and/or several other government agencies. If the clause is approved, there will be many former military men who won't be happy.

. . . Robert M. Loebelson

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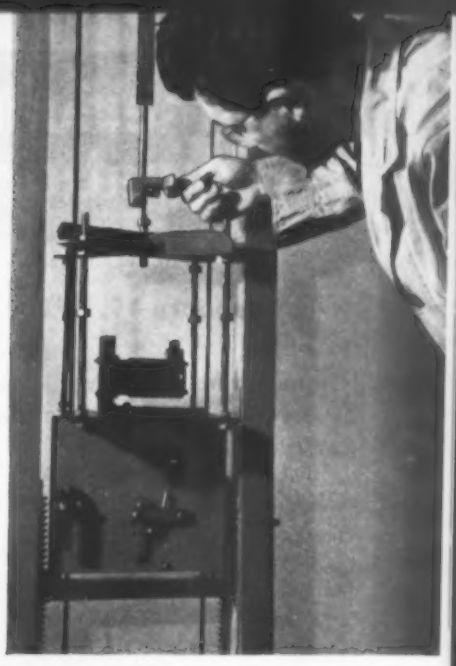

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Letters

SAFETY STUDY

To the Editor:

I was very much pleased with your treatment of my study dealing with the "Myth of Three" in connection with fatal airline accidents, particularly the prominence you gave the article. As you know, this appeared in the issue of December 8th.

There is, however, a statement made in the article which is incorrect, apparently due to misinterpretation of what was said in the original study. I refer specifically to the wording on page 40 that:

> "The frequency of airline fatal accidents, *the number of days* between groups, is on the increase, an increase of 700% during a period when plane miles increased only 170%."

and on the following page:

> *"The interval of time between groups of accidents* has increased by 700% during the postwar period as contrasted with prewar and wartime experience." (italics supplied)

Actually, an increase in time interval between accident groups would mean a decrease in frequency since there would be fewer accidents in a given space of time. If, for example, two accidents were separated by 20 days, the frequency would be only one-fourth as high as in the case of accidents spaced at an interval of five days. A frequency as high as the latter would mean four such occurrences in the 20-day period.

In the study under discussion, the average spacing for the prewar and wartime periods was about 44 days, whereas that of postwar was 5.4 days. Thus there would be a little more than eight postwar accidents in a period equal to the average of prewar and wartime, or a frequency ratio of something over eight to one. This means that the postwar frequency increased about 700% over that of its predecessor periods, as stated in the study. Nothing was said about an increase in time interval between accident groups.

I believe that publication of this letter in the appropriate section of AMERICAN AVIATION will clarify the results of my study as they are given in your article.

DAVID S. STANLEY
Air Transport Analyst
Evanston, Illinois

NO AGREEMENT

To the Editor:

We in American Airlines were surprised to read in the December 22 issue of AMERICAN AVIATION that "Agreement also has been reached with American Airlines for the first Douglas DC-7 to be equipped with an L-5 which will make it possible for the Lear autopilot to be CAA certified in this equipment at the same time that the airplane is tested for its type certificate."

This is to confirm my conversation with you that American Airlines has made no "agreement" with either Lear or Douglas to have the L-5 autopilot installed in the DC-7.

M. G. BEARD
Chief Engineer
American Airlines
La Guardia Field, N. Y.

•

INTELLIGENCE BRIEFING

To the Editor:

In connection with our work of presenting Intelligence Briefing, we have learned that you published an article in your excellent magazine AMERICAN AVIATION about a conjectured new type Soviet bomber.

It would be greatly appreciated if your company could provide us a copy of this article, subject of course, to any limitations you wish to impose. The material will not be republished in any form and will be used solely in classified intelligence briefings used in furtherance of the Air Defense Command Mission of guarding these United States.

Your cooperation in this mattter is sincerely welcomed.

ODIN E. SORENSEN
WOJG, USAF
Asst. Director of Intelligence

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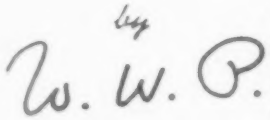
Editorial

How to Improve AF Safety

IT IS NOT ENOUGH to say that flying an airplane is a specialized business. There are many types of airplanes and there are many kinds of missions. Flying is not one but an entire series of specializations.

We submit that the incoming Secretary of the Air Force, Harold Talbott, would do well to devote a major part of his attention to Air Force flying and safety. The recent series of publicized accidents and the resultant flurry of interest in Congress and on the editorial pages are based on no new development. But the Air Force will continue to be on the receiving end of criticism (and a high accident rate) until it recognizes the differentials involved in flying.



In the furtherance of its objectives toward air power the Air Force has continued to engage in all types of flying, and especially in air transportation. The Air Force is not set up for transportation. It is not qualified, as yet anyway, to engage in transportation of its men except on purely military missions. Transportation is a specialization. So is fighter flying and bomber flying. But the Air Force has never geared its training, or its maintenance, or its operational facilities, for routine air transport. It will continue to run into trouble until it distinguishes between military and routine transport operations.

Military Air Transport Service was created to perform the air transport job for the armed services, but it has never received the whole-hearted support it needs. Too many rank amateurs in uniforms with low-ranking commissions are undertaking to fly plane loads of military personnel around the country when this task should be performed by a service such as MATS, which is specifically set up for the purpose. The day is long past when an airplane is an airplane and any pilot is an experienced pilot. Air transport is a specialization.

The Air Force can point to accidents in the commercial air transport field as proving that even this highly specialized industry has accidents, but the point is moot. The fact remains that if the Air Force wants to reduce its high accident rate it must improve the quality of training and maintenance and, above all, recognize that transportation outside of military areas is something that can be handled only by specialists. When the military has rail movements it leaves the job up to specialists who know railroading. The same thing applies to air transportation.

Another Merger

The Civil Aeronautics Board deserves commendation for the expeditious handling of the latest merger of Delta Air Lines and Chicago & Southern Air Lines. In the final days before the New Year, when hours counted, it was Member Joseph Adams, the only member in the capital during the holidays, who worked without a break until the President had signed the documents and the formal approval order was issued. Had the case held over until the first of the year both airlines would have been put to a great deal of expense for new audits.

Of the original sixteen trunk airlines awarded "grandfather" certificates under the Civil Aeronautics Act of 1938, there will be only thirteen when the formalities of the Delta-C&S merger are complied with. We believe the merger is constructive and healthy. It is a symbol of the transition from DC-3 economy into the DC-6B and Constellation economy which the entire industry has experienced.

With the Braniff/Mid-Continent merger completed a few months ago, the CAB has chalked up an exceptionally good record of two major consolidations for one year, each of which contributes toward a more balanced and non-subsidized airline industry. The CAB has handled both cases well. For Delta-C&S Air Lines, we are sure the future holds much in store.

Comet III Certification

The road ahead is not at all clear for the three de Havilland jet Comet III's which Pan American Airways has ordered for delivery starting in 1955. PAA's contract with de Havilland requires that the British company obtain CAA certification for Comet III and establish to PAA's satisfaction that it is trying "in good faith" to get this certification. Otherwise, the contract is invalid.

There seems to have been a feeling in some British quarters that Comet III would be almost automatically certificated, especially if it met ICAO standards. But that is not the view in the U. S. The CAA certainly will not certificate, and could not be expected to certificate, any airplane until it has been tested. So far Comet III is still on the drawing boards.

CAA Administrator Charles Horne has set up a long-range jet certification team but this is not enough. A more specific program is needed so that de Havilland, the British Air Registration Board, Pan American, and all others involved know where they stand. Otherwise the current leisurely confusion may lead to something worse.

. . . WAYNE W. PARRISH

Meet Your Editors

Philmus

CORPORATION and executive flying is rapidly becoming one of the important facets of the aviation industry. In order to bring its readers the widest news coverage possible, AMERICAN AVIATION expanded its staff to include a corporation aircraft editor in the person of Lois Corrinne Philmus. Lois, who has been an aviation writer for about seven years, is responsible for reporting the top news in the general aviation field, with emphasis on the ever-growing field of business flying.

In addition to being in contact with the various general aviation associations in Washington and covering CAA, she attends the various meetings around the country of interest to business aviation and works with the corporations utilizing aircraft as a business and industrial tool.

Born February 16, 1927, in New Haven, Conn., the Connecticut Yankee was transferred to New York at age three and lists New York as her official residence. After graduating from Newtown High School in Elmhurst, L. I., she went to work at the Institute of the Aeronautical Sciences and served as editorial assistant for the *Aeronautical Engineering Review* from 1944 to 1946. Next step was to become an associate editor of *Airlanes* magazine.

During Lois' stint at the Institute, she learned to fly in a Piper J-5 and got her certificate in 1946. To round out her aviation education, she studied navigation and meteorology.

For four years after leaving *Airlanes,* Lois forsook aviation for the shine and glitter of the press agent's life. She was assistant public relations director for New York Hospital's nursing service, going from there to straight commercial publicity for artists, beauty salons, cigars, and hearing aids, and finally landing in the magic circle of TV. where she represented TV personalities and was assistant producer of the Faye Emerson Show for 39 weeks.

After the glitter tarnished on the theatrical world, Lois returned to aviation, where she intends to stay. As associate editor of *Flying* from 1951 until joining AMERICAN AVIATION in March of 1952, Lois was able to catch up with the developments she had missed in four years, although she had kept her hand in with free lance articles for various aviation publications.

To "get away from it all," Lois likes a nice canter in the country, or a set or two on the tennis court. For quiet times, she enjoys needle work and reading. This, plus flying and serving as Captain of the Philibusters, one of the teams of AMERICAN AVIATION's duck pin league, manages to keep her well occupied.

When & Where

Jan. 19-23—Winter Meeting, American Institute of Electrical Engineers, Statler Hotel, New York.

Jan. 19-23—Plant Maintenance Conference, Public Auditorium, Cleveland, O.

Jan. 26-30—Institute of the Aeronautical Sciences, Annual Meeting and Honors Night Dinner, Astor Hotel, New York.

Feb. 12-13—National Aviation Education Council, Annual Meeting, Atlantic City, N. J.

Feb. 18—Instrument Society of America, New York Section, Statler Hotel, New York.

Mar. 11-13—Indiana-Ohio Joint Agricultural Aviation Conference, Purdue Univ., W. Lafayette, Ind.

Mar. 13—Institute of the Aeronautical Sciences, 8th Annual Flight Propulsion Meeting, Carter Hotel, Cleveland, Ohio.

Mar. 22-27—Congress of Aviation Organizations, Municipal Auditorium, Kansas City, Mo. (includes Airport Operators Council and AAAE, Mar. 23-26).

Mar. 23-27—8th Western Metal Exposition, Pan-Pacific Auditorium, and Western Metal Congress, Statler Hotel, Los Angeles.

Mar. 25-27—SAE Production Forum, Statler Hotel, Cleveland, Ohio.

Mar. 27—National Association of State Aviation Officials, Board of Directors Meeting, Kansas City.

Mar. 31-Apr. 2—1st International Magnesium Exposition, National Guard Armory, Washington, D. C.

Apr. 20-24—SAE, Aeronautic & Aircraft Engineering Display, & Aircraft Production Forum, Hotel Governor Clinton, New York.

International

Feb. 16—IATA, Ops Sub-Committee, 4th Meeting, Montreal.

Feb. 23—IATA, Technical Committee's Administrative Panel, Montreal.

Feb. 24—ICAO, First Air Navigation Conference, Montreal.

Mar. 23—IATA, Medical Committee, 3rd Meeting, Estoril, Portugal.

Apr. 20—IATA, 6th Technical Conference, Puerto Rico.

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CA53-1UST

Defense Budget in 1953: Peak or Valley?

IT HAS BEEN SAID that the darkest hour is just before the dawn, and it might also be stated conversely that the brightest hour is just before the storm.

This is unquestionably the brightest postwar hour the aircraft industry and the military air forces have seen. The Air Force has hit the 100-wing mark en route to its authorized goal of 143. Aircraft plants are operating at high production levels and some backlogs top the billion mark.

But the storm is gathering on the horizon. The storm is the Republican determination to operate on a balanced national budget in the first year of the new regime, a determination which may cause another "valley" in the chain of peaks and valleys of aircraft production.

Practically every Republican leader has publicly stated that the forthcoming budget must be cut, some feeling that as much as $10 billion can be chopped out of it. Some of the cut can probably be made in non-defense funds, but since defense money constitutes well over half the total budget, any substantial reduction would have to be made at the expense of defense money. And, since aircraft procurement funds amount to one-fifth of the defense budget, it follows that any large reduction will cut into this procurement money.

The budget now before Congress is an extremely "tight" one; that is, there are no items in it which may be tossed out without jeopardizing the defense build-up. For that reason, any cut will be serious. It is estimated that a cut of $1 billion in aircraft procurement funds will move the attainment date of the 143-wing Air Force back another year. A really big cut might eradicate the 143-wing figure in favor of a smaller force.

There is another possibility which might cause even more damage to the air power build-up program. Chopping the new budget is one way of balancing the national budget, but there is another way—limiting expenditures for the year, a method which was almost put into effect last year. The new budget calls for authority to contract for airplanes which would not actually be paid for until 1955 or 1956. A limit on expenditures would not affect this budget, but it would hit the fiscal 1952 and 1953 budgets. In other words, an expenditure limit would take away money already appropriated.

It would appear, from the stated attitude of the Republican leaders, that the air expansion program is in for rough going. It is to be hoped that public opinion will change this attitude. This is not the time to slow down the expansion program—it is on the verge of attaining a concrete goal for the first time since World War II and one more year's financing will get the program over the hump.

And despite some optimistic statements about the imminence of war dissipating, there is no valid reason to believe that the Kremlin has changed its aggressive ways. A softening of the burden of the poor taxpayer is certainly something to be desired, but not if it is to come at the expense of defense.

Weather or Not

The Aircraft Owners and Pilots Association is hopping mad at the Air Force for refusing, with bureaucratic arrogance, to provide weather information to transient civil pilots. There have been several cases where civil pilots have telephoned military bases asking for weather data in locations where there are no other facilities available and have been denied the information.

AOPA asked the Air Force how come, and received the rather unsatisfactory answer that an Air Force regulation requires that non-military requests for weather observations and meteorological data be referred to the national weather service. In addition, said the USAF, the Air Weather Service would have to be expanded considerably if it were given the additional responsibility of serving the civil population.

This might be a reasonable answer if every civil pilot in every location were to call upon the Air Force, but Air Force help is asked only when there are no Weather Bureau facilities available. We find it hard to believe that a few five-minute phone conservations on the part of Air Weather Service personnel comes under the heading of considerable expansion.

The Navy doesn't consider it much trouble to provide weather data. Navy officials informed AOPA that they would be glad to provide the information when it could not be obtained elsewhere, and have been doing so without any noticeable expansion of facilities.

Gilpatric Key Man

Some insiders in Washington report that there is a good chance that Under Secretary of the Air Force Roswell L. Gilpatric might be kept on in his job under the new Administration. Defense Secretary Robert A. Lovett reportedly has recommended that Gilpatric, as a key man, be reappointed.

Other sources doubt that the Republicans will go along with the suggestion. After twenty years, they say, the Republicans are too "hungry" for the top Administration posts to tolerate keeping on a member of the old regime. But President-elect Eisenhower is reportedly more interested in getting the right man in the right job than in political patronage, and on this basis Gilpatric might be reappointed.

It is certainly to be hoped that he will be, for Gilpatric has been the outstanding man in the Department of Defense set-up and the key man in the air expansion program. A keen, intelligent man with the rare ability to master both top-level policy and detail work at the same time, Gilpatric has brought more talent to one of the most important jobs in defense than anyone within our memory. He has gained considerable stature within the aircraft industry while handling a difficult job, and it is safe to say that the industry as a whole would welcome his reappointment.

. . . James J. Haggerty, Jr.

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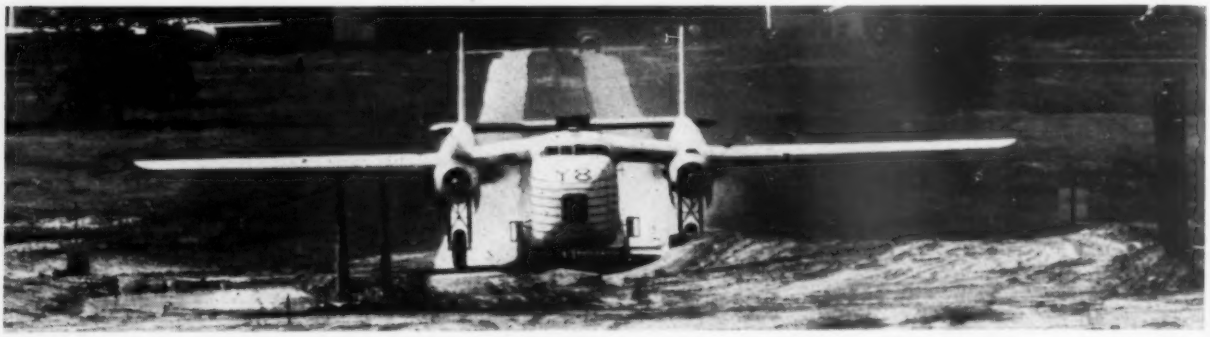
As appearing in Time Magazine and the New Yorker

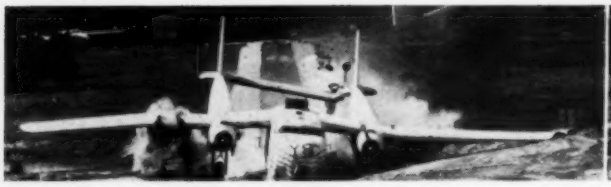
NACA Cracks Up Planes to Study Crash Fires

By deliberately wrecking monorail-controlled planes, such as the Fairchild C-82 in this series of photos, the National Advisory Committee for Aeronautics has learned quite a bit about how crash fires start and what can be done to prevent them. NACA conducted the tests at the Army's Ravenna Arsenal in Ohio. High-speed motion picture cameras provided a detailed photographic record of the crashes.

NACA says that the results of the tests show that significant reductions in the crash-fire hazard can be realized. Just what needs to be done NACA cannot say for military security reasons, but the information has been made available both to the manufacturing industry and operational personnel of the airlines. From further research, now in progress, NACA hopes to be able to reduce the hazard to an even greater degree.



1. Failing to become airborne . . . .



2. The C-82 strikes an embankment . . . .

3. One wing breaks off . . . .

4. And the landing gear crumples . . . .

5. While a fuel tank ruptures . . . .

6. And the aircraft skids to a stop.

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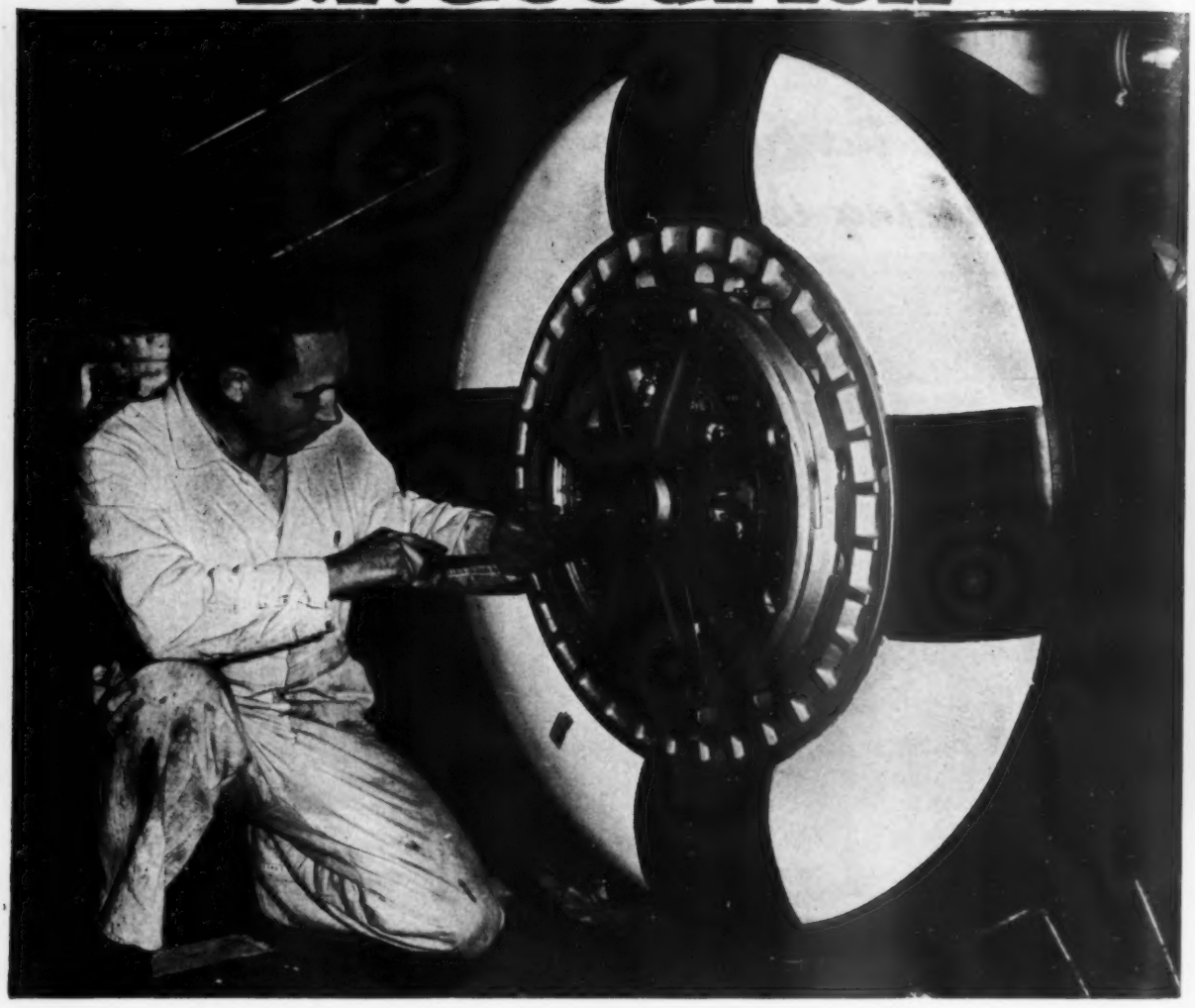

B-52's bicycle gear uses B.F. Goodrich wheels, brakes

LANDING GEAR on the B-52 Stratofortress has to bring in safely one of the U. S. Air Force's largest bombers. Boeing decided upon eight wheels in a bicycle arrangement. The same B. F. Goodrich 60,000 lb. wheel proved on the B-47 is used. This wheel has taken test loads up to 300,000 lbs.

B. F. Goodrich Expander Tube brakes have a new kind of brake block. No rivets are used. The brake lining is cemented onto a light magnesium shoe. The braking action applies equal pressure over the full circle of the drum to give greater power, to distribute the load better. The narrow-cavity expander tube gives more braking pressure with less fluid.

Landings are safer and smoother. BFG brakes respond smoothly and quickly to minimum pressure, take emergency overloads better, cannot lock or grab. And they last longer because more of the brake lining is used. Elimination of rivets permits full, positive braking down almost to the metal backing.

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Other aviation products to come from BFG's research and engineering include: heated rubber, pneumatic and electric De-Icers, inflatable seals, Avtrim, Pressure Sealing Zippers, Plastilock adhesives, fuel cells, Rivnuts, accessories. *The B. F. Goodrich Co., Aeronautical Division, Akron, Ohio.*

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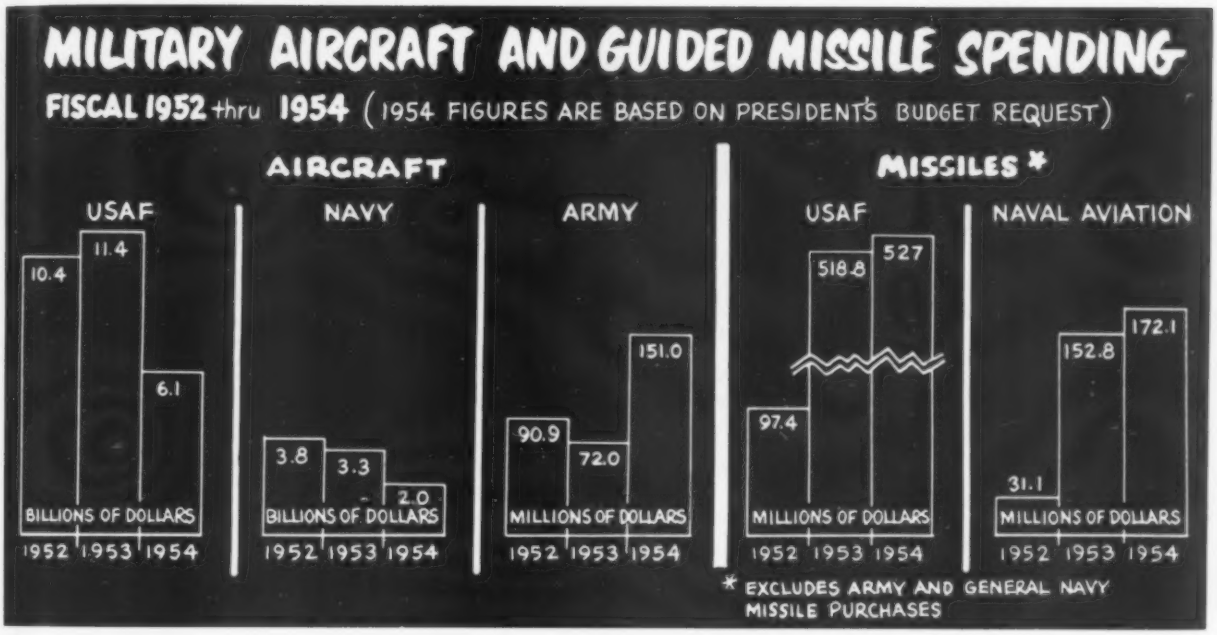

U.S. Fiscal 1954 Budget Figures Revealed

One out of every nine dollars, or $8 billion, earmarked for military aircraft and components.

By Robert M. Loebelson

ONE DOLLAR in every nine that the U.S. Congress appropriates during the 1954 fiscal year beginning next July 1 will go for the purchase of airplanes and related items.

President Truman's 1954 budget message, submitted to the 83rd Congress last week but not likely to be considered until President-elect Eisenhower presents his own this spring, calls for a total of $72,383,320,941. Of this amount the Defense Department and supporting activities are slated to receive $41,535,208,000, and procurement of aircraft and related equipment, in turn, is down for more than $8 billion, spread among the Army, Navy, and Air Force.

Here is how the services stack up:

- **USAF**—$16,788,000,000 in 1954 vs. $20,602,841,000 in 1953 and $22,375,263,377 in 1952. These figures denote new obligational authority rather than expenditures, for the expenditure figures would be higher all along the line.
- **Navy**—$11,367,732,000 in 1954 vs. $12,620,574,958 in 1953 and $16,196,130,309 in 1952.
- **Army**—$12,044,591,000 in 1954 vs. $13,472,730,298 last year and $21,326,671,795 in 1952.
- **Defense Department** supporting activities (NACA, stockpiling of materials, selective service, etc.)—$1,183,450,000 vs. $715,026,600 in 1953 and $1,039,078,751 in 1952.

One big part of the jump over last year is a request for $500 million for purchase of special-purpose machine tools which would be installed or stockpiled to prevent recurrence of the machine tool bottlenecks prevalent after the outbreak of World War II and the Korean War.

Accompanying tables show how the three services have scheduled use of funds which they hope the 83rd Congress will authorize.

Mr. Truman's budget also indicates that the USAF is expected to reach 106 wings at the end of fiscal 1953, i.e., by June 30, and will climb to 133 wings by the time fiscal 1954 ends. The approved 143-wing goal is currently scheduled to be attained by December, 1955.

Other interesting points in the new budget:

- **No funds are requested** for any of the defense mobilization agencies (ODM, DPA, ESA, Small Defense Plants Administration, Defense Materials Procurement Agency, etc.). The President apparently is leaving their fate up to Gen. Eisenhower.
- **An additional $7.6 billion** (as opposed to $6.46 billion in 1953) will be requested in a future budget proposal, for mutual security. Some of this money will involve aircraft and related procurement but it is not yet known exactly how much.

USAF Aircraft and Related Procurement

Description	1952 Actual	1953 Estimate	1954 Estimate
Direct Obligations			
Aircraft and related procurement	$10,374,901,311	$11,352,665,398	$6,131,400,000
Guided missiles	97,442,980	518,847,863	527,000,000
Industrial mobilization	3,762,733	16,972,553	5,600,000
Total Direct Obligations	$10,476,107,024	$11,888,485,814	$6,664,000,000
Reimbursement From Other Accounts			
Aircraft and related procurement	58,648,507	111,522,064	35,150,000
TOTAL OBLIGATIONS	$10,534,755,531	$12,000,007,878	$6,699,150,000

OTHER USAF MAJOR PROCUREMENT

Description	1952 Actual	1953 Estimate	1954 Estimate
Direct Obligations			
Weapons and ammunition	$606,526,325	$404,927,711	$332,350,000
Ground-powered and marine equipment	230,886,604	209,506,635	90,650,000
Electronics and communication equipment	352,666,446	453,798,695	300,000,000
Training equipment	101,953,552	87,368,388	45,000,000
Other major equipment	146,182,946	346,989,353	132,000,000
TOTAL OBLIGATIONS	$1,438,215,873	$1,502,590,782	$900,000,000

Army Procurement and Production

Description	1952 Actual	1953 Estimate	1954 Estimate
Weapons	$3,358,800,897	$346,786,911	$291,465,575
Electronics & communications equipment	580,461,122	245,598,820	224,632,000
Ammunition and Guided Missiles	2,342,497,156	2,510,789,899	1,527,685,490
Army aircraft	90,998,226	72,067,815	150,902,935
Reimbursements from non-Federal sources:			
Ammunition and guided missiles		22,400,000	7,000,000
Obligations Payable Out of Reimbursements From Other Accounts			
Weapons	349,058	38,295,000	192,000,000
Electronics and communications equipment		43,063,500	5,000,000
Ammunition and guided missiles	1,386,986	374,016,500	44,000,000

Naval Aircraft and Related Procurement

Description	1952 Actual	1953 Estimate	1954 Estimate
Direct Obligations			
Aircraft procurement	$3,769,172,659	$3,243,479,148	$1,894,483,000
Ordnance for new aircraft	72,305,700	59,066,500	105,954,000
Guided missile and target drone procurement	31,146,500	152,800,000	172,170,000
Technical equip. for service training	10,750,000	6,455,000	7,588,000
Aircraft modernization	25,420,000	16,618,000	53,939,000
Total direct obligations	$3,908,794,859	$3,478,418,648	$2,234,134,000
Obligations Payable Out of Reimbursements From Other Accounts			
Aircraft procurement	16,231,903	62,093,097	56,758,000
OBLIGATIONS INCURRED	$3,925,026,762	$3,540,511,745	$2,290,892,000

The Civil Aeronautics Administration is down for a total of $163,028,000 in new obligational authority, an increase of more than $24 million over the fiscal 1953 estimate of $138,511,143. Not included in the CAA budget request are funds to carry on evaluation testing of jet aircraft. In previous budgets about $1.4 million was asked for this purpose and it is likely that a similar amount will be sought in a CAA supplemental request.

Airport Program

CAA's breakdown, however, does show that $30 million is being requested under the Federal-aid airport program, as against $14,321,154 appropriated last year. And money is again being asked for the Burke, Va., airport ($1,660,000) which will serve as an alternate to Washington National. Last year's requested money for this purpose was turned down by Congress.

Following is CAA's budget breakdown for fiscal 1954:

Item	1953 estimate	1954 estimate
Salaries and expenses	$105,594,000	$110,300,000
Establishment of air navig. facilities	7,450,000	13,000,000
Tech. development and evaluation	1,162,972	1,163,000
Operation, Wash. Nat'l Airport	1,350,000	1,350,000
Construction, Wash. Nat'l Airport	28,000	455,000
Addition, Wash. Nat'l Airport (Burke)	....	1,660,000
Fed.-aid airport program	14,321,154	30,000,000
Oper., Alaskan airports	433,594	1,100,000
Air navigation development	1,750,000	4,000,000
Airport claims	1,821,423	....
TOTAL		$163,028,000

The Civil Aeronautics Board, which received $3,800,000 for fiscal 1953, is down for $3,950,000 for the coming year.

A total of $73,430,000 is being sought for the National Advisory Committee for Aeronautics for fiscal 1954 vs. $65,286,100 during the fiscal year ending next June 30.

The comparison of NACA's budgets shows that NACA is listed for $58,830,000 for salaries and expenses and $14,600,000 for construction and equipment in the coming year. In 1953 NACA got $48,586,100 for salaries and expenses and $16,700,000 for construction and equipment.

News Briefs

PEOPLE

With **half our air force obsolescent,** the Russians are equalling or bettering our present output, and have produced five times as many aircraft as we have in the past five years. The grim analysis comes from Chief of Staff **Gen. Hoyt S. Vandenberg,** who warns, in the current issue of AIA's *Planes,* that any relaxation in production would be "catastrophic."

• •

Newest board member at Jack & Heintz is **Walter J. Milde,** who was appointed during a meeting which also broke the glad tidings of a 15 cent dividend per share of common stock, payable February 1, to stockholders of record January 15.

• •

United Air Lines' management can rest easy, according to a UAL spokesman in Chicago, who assured AMERICAN AVIATION that "talk in aviation circles" (published in *Aviation Week*) of a possible shake-up in the upper echelons was "entirely without foundation." Supposedly at issue had been the leadership of President W. A. Patterson.

• •

William B. Davis, deputy director of the CAA's Office of Aviation Safety and recently a controversial figure, has been named **deputy regional administrator at Kansas City.**

• •

How to get along with the government is the subject taught to local firms by the **Defense Production Committee** of the California Manufacturers Association. Head instructor for 1953 will be **Henry P. Nelson,** president of the Menasco Manufacturing Co., who has been appointed chairman.

• •

New man on the staff of Convair's F. C. Sebold, vice president-engineering, is **Frank W. Davis,** former assistant chief engineer for research and development in the San Diego division.

• •

Who is salesman of the year? **T. E. Braniff,** president of Braniff Airways, as far as the Dallas Sales Executive Club is concerned. In a state not noted for self-effacing representatives, Braniff contributed most to the civic and business advancement of Dallas, in the club's opinion.

• •

In the **Institute of Aeronautical Sciences,** newly elected president **Charles J. McCarthy,** of United Aircraft, will be assisted by the following vice presidents: **George W. Brady,** Curtiss-Wright; **Clarence L. (Kelly) Johnson,** Lockheed; **James S. McDonnell, Jr.,** McDonnell; **Ernest G. Stout,** Convair. Treasurer is **Preston R. Bassett,** Sperry. Re-elected as director, secretary, and controller are **S. P. Johnston, R. R. Dexter,** and **J. J. Maitan,** respectively.

• •

Buckaroo T-35 trainers have been ordered from Temco Aircraft for use by MDAP countries. A YT-35 version has been undergoing USAF evaluation tests for a year (for further details, see page 65).

FINANCE

North American Aviation, Inc., reported a net income of $7.8 million for the fiscal year ended September 30, a noticeable change from the $6.4 million net of the year before. Profit amounted to $2.28 a share on sales of $317 million.

Ryan Aeronautical Corp. racked up a total net of $878,359 in its 1952 fiscal year. The income, **more than double 1951's,** is an all-time high for the company. Sales volume of $35 million was up 50% over the previous year.

• •

Pacific Airmotive Corp. reports its unaudited sales of $27.5 million for the fiscal year ended November 30. Figure represents an increase of almost **15% over 1951 sales.**

• •

A **record backlog** of $38 million has been chalked up by **Lockheed Aircraft Service, Inc.,** a figure which takes into account over 700 tactical, training, and transport aircraft with overhaul and modification work to be done on them. Airline conversion orders for Connies and DC-6's helped.

• •

How do you report a **net profit of $4.1 million after taxes?** Delta did it in 1952, with a large assist from the **sale of six Douglas DC-4's** at a reported average price of $650,000. Operating profit, according to C. E. Woolman, president and general manager, should be $1.6 million after taxes.

• •

Passenger revenues of $27 million are expected for 1952 by **Braniff Airways,** compared with merely $20 million in 1951. Net earning report, however, will not be so rosy, due to increased operating costs and some non-recurring expenses. Carrier carried some one million passengers in the year, up 20% from 1951.

ON THE COVER

Harold E. Talbott, 64, is President-elect Eisenhower's choice for Secretary of the Air Force. Talbott has had a long career in the aviation industry and is an authority on aircraft production. He served as president of the old Dayton Wright Airplane Company back in 1914 through 1920. During his distinguished career he was Board Chairman of North American in 1931-1932. His government service includes the post of director of aircraft production for the War Production Board, which he held in the early part of World War II.

Incremental Cost of United's DC-4 Coach Service

(Actual first nine months 1952—estimated for 58 seat configuration)

	Costs (000)	Per revenue plane-mile
Flight Operations		
Flight personnel salaries and expenses	$ 648	$ 0.171
Fuel & Oil (inc. taxes)	993	0.262
Insurance	11	0.003
Misc. Flight expenses	4	0.001
Landing fees	43	0.011
Stewardess salaries and expenses	118	0.031
Flight equipment maintenance	542	0.142
Depreciation flight equipment	162	0.043
Promotional expense	49	0.013
Passenger liability ins.	114	0.030
Total incremental costs	$2684	$ 0.707
Conversion costs*	54	0.014
Estimated costs with 58 seat density	$2738	$ 0.721
Non-passenger revenue	567	0.149
Required break even Pass. Rev.		
66 seats (0.707 minus 0.149)		0.558
58 seats (0.721 minus 0.149)		0.572
Required break even Pass. L. F. (@ .0398 yield)		
66 seats		21.2%
58 seats		24.8%

** United estimates that the costs for removing certain seats and installing an additional emergency exit will total $6,000 per aircraft. United has 12 DC-4 aircraft in coach operations which accounts for the estimated conversion costs of $72,000. It is assumed that those costs would be amortized over a one-year period. Inasmuch as experienced costs shown in the table are for 9 months, the stated conversion costs are for a like period.*

Thumbs Down on UAL 'Safety' Seating

United proposes but Board disposes; carrier is found in violation despite economic and safety arguments.

By William V. Henzey

THINGS are happening fast in the United Air Lines fight (American Aviation, December 22) to reduce the number of passengers carried in a Douglas DC-4 coach plane:

• **On November 24** United started limiting maximum passenger capacity on its DC-4 coaches to 54 passengers for "safety reasons." This was in contradiction of UAL's coach tariff.

• **On December 30** United requested the Board to reconsider its policy and establish a minimum seating density of 58 passengers on DC-4's.

• **On January 6** CAB turned down United's request and ordered the company to "discontinue immediately" the practice of limiting loads to 54 passengers. The Board stated that the whole coach expansion program could be hindered and the practice may be "unfair competitive practice."

• **On January 7** United president W. A. Patterson, noting that he had a "deep moral conviction" that his action was necessary as a safety factor, announced he would "continue to operate the coaches with the reduced seating" in defiance of the Board order.

• **On January 8** United filed a new tariff, seeking CAB approval with existing fares and based on 54 passengers in DC-4 coaches for the next 145 days, followed by a 58-passenger tariff at the end of that time.

• **On January 9** United announced it will start operating Douglas DC-6 aircraft in coach service to Honolulu with provisions for 70 passengers, as of May 1, and that similar steps would be taken domestically in the near future.

United's argument is based on two major points:

• **Economic considerations,** relied on by CAB when it set present minimum seating densities, "are no obstacle to reducing DC-4 coach densities to 58 seats."

• **With economic considerations removed,** the densities should be lowered "in view of the additional and very basic factor of safety which is also involved."

Differs from Cut-Back

United's 58-seat proposal differs from its original voluntary cut-back in November when passenger loads on DC-4 coaches were limited to 54 because the company believed passenger survivability in the case of an accident was minimized by existing standards.

Company considers the 54-passenger restriction a temporary measure until DC-4 coaches can be modified to a new configuration under which three-abreast seating would be eliminated and aisles widened. Program calls for the addition of two-abreast seats forward of the front bulkhead and an emergency exit in that section.

With modification estimated to take four months, UAL now asks CAB to grant an exemption which would permit the 54-passenger restriction to be maintained until the modification is completed. After that, the 58-seat configuration would be used if CAB goes along.

Current Policy

Current Board policy was established December 6, 1951. Calling for expansion of scheduled coach operations, the policy statement set these minimums for high-density coach planes:

DC-4 ..... 64 seats
DC-6 ..... 68 seats
Constellation .... 79 seats

Further, CAB stated, "minimum seating density for other aircraft types will be established in connection with specific carrier proposals. It should be noted that the above minimum seating densities represent the minimum from an economic standpoint, while the maximum will be predicated on safety considerations."

United, in seeking reconsideration of this policy, claims it can operate DC-4 coaches at the 58-seat minimum profitably, thus eliminating economic arguments against its proposed cutback.

On an incremental cost basis, using figures of the first nine months of 1952, the company estimates it would need a break-even passenger load factor of only 24.8% at the 58-seat figure. On a fully-allocated cost basis for the same period, United figures a 61.4% load factor would be needed to break even. On a 58-seat plane that would mean about 35 passengers.

Excess of 35

Carrier claims it carried in excess of 35 passengers per flight on its coach service during the past year. "If similar traffic and economic conditions prevail," it added, "more than that number of passengers per flight should be available on United's proposed 58-passenger coach equipment during the coming year. On the basis of these premises United expects profitable operations on its DC-4 coach services in 1953."

Thus, the "very basic factor of safety" should be considered, United contended. With economic arguments out of the way, it was argued, "the Board would be remiss in discharging its obligations

. . . if it did not take advantage of that circumstance to authorize such reduction in density, particularly when the question of safety has been raised by a carrier subject to its jurisdiction."

Referring to its voluntary cut-back in density, United said its decision was arrived at only after careful examination and realistic evaluation of a considerable amount of information and material, including opinions of individuals and concerns whose primary business involves the promotion of safety. Basis of the move was the conclusion that present seating arrangements in DC-4 coaches "may not provide proper safety in the event of aircraft accidents involving fire."

Cited in support of this conclusion was a letter from George H. Tryon III, secretary of the committee on Aviation and Airport Fire Protection of the National Fire Protection Association, addressed on November 6, 1952, to United's assistant director of safety, in which he said in part:

"Our association is greatly concerned over the present trend toward high density occupancy of existing aircraft from the point of view of life safety following impact accidents involving fire. It is our feeling that current authorizations . . . for occupancy of airplanes carrying passengers for hire will render even more difficult the rescue problems faced by fire fighters following a crash impact."

". . . it is our opinion that the increased occupancy authorizations . . . are a threat to public safety which should be energetically opposed by all concerned with safeguarding the lives of those who use the commercial airlines as an instrument of public transportation."

The "current authorizations" referred to by Tryon were in CAB special regulation No. SR-387, which was superseded by No. SR-389, effective October 27, 1952, entitled "Emergency Exits for Airplanes Carrying Passengers for Hire."

Also cited by United was a statement attributed to Jerome Lederer of the Flight Safety Foundation in which he said: "High density aircraft (tourist class) are going to provide a problem . . . When you crowd 85 or so passengers into a plane that normally accommodates say 60 persons, I am afraid that there are going to be some very sad experiences if fire follows a crash."

Thus, United submitted that the proper approach to the passenger carrying capacity of coach aircraft is to first study the possibilities of passenger survival in the event of a crash and then to engineer density on the basis of such findings. United said it has taken this approach and "believes that its revised DC-4 configuration (58 seats) will meet that test."

Some non-scheduled airlines have applied to CAB to fly coach flights over United's transcontinental route. One of these, Air America, Inc., wired Board Member Joseph P. Adams that it should be authorized to fly two daily round-trips over the route "in view of vast public demand for increased not decreased coach service."

But United indicates that it is in the coach business to stay. It told CAB it has implemented and intends to continue to implement the Board's policy of establishing two standards of air service, namely aircoach and first class service.

"United presently operates both of those types of service and has been enlarging its aircoach operations," the carrier continued. "In fact, United is one of the air carriers that is experimenting with the extension of coach service to moderate-sized intermediate communities. Furthermore, it has committed itself at a public hearing before Examiners of the Board to further expand its aircoach operations." • • •

Fully Allocated Costs

United DC-4 Coach Service

(Actual first nine months 1952—estimated for 58-seat configuration)

	Costs (000)	Per revenue plane-mile
Total fully allocated costs	$5896	$1.553
Conversion costs (for 58 seat density)	54	0.014
Total allocated costs (58 seat density)	$5950	1.567
Non-Passenger revenue	567	0.149
Required break-even pass. rev.		
66 seats		1.404
58 seats		1.418
Required break-even pass L. F. @ .0398 yield)		
66 seats		53.3%
58 seats		61.4%

CAB Defers Action on Travel Agents

The world's airlines have been stymied, at least temporarily, in their plans to put into effect new commission rates for travel agents.

The Civil Aeronautics Board deferred action for 45 days on International Air Transport Association resolutions dealing with agents, "in order to permit interested persons the opportunity to submit in writing such reasons as they deem appropriate for not disapproving such resolutions, together with supporting data."

New rates were to have become effective January 2, 1953. At the traffic conference meetings in Cannes, France, IATA had voted to pay travel agents 7% commission on both first class and tourist sales, instead of the present 7½% first class and 6% on Atlantic tourist. The 6% rate had resulted in a storm of protest from agents. Now, however, the 7½% and 6% figures remain in effect until CAB acts.

At the same meeting, IATA had increased the overriding commission for general sales agents on passenger sales from 2½% to 3%, so that the total for such agents would remain at 10% under the new set-up. It had also established rules regarding retention of travel agents, so that the IATA agency subcommittee could review the list of authorized agents and drop those who were not producing sufficient business.

CAB deferred action on these items, stating that retention rules "may result in arbitrary decisions which would have an injurious effect on the agents." On the commission rate and the override for general agents, it said that these "may not be fair and equitable to all concerned—the carriers, the agents and the public."

Because IATA resolutions require approval from all governments, they cannot become effective unless CAB, after receiving comments, decides to approve them. • • •

NEW MARLIN, the P5M-2, will show tail and bow design changed from that of the P5M-1, above.

Martin Comes Back: $5 Million 1952 Net

Backlog of half billion evenly split between Navy and Air Force as effects of reorganization show up.

By Robert M. Loebelson

MIDDLE RIVER, MD.—Top executives of The Glenn L. Martin Co. are now putting the finishing touches on the company's annual report for 1952—a financial statement which is expected to show a net income of something like $5 million in sales which topped $135 million. The report is also expected to indicate a backlog of about half a billion dollars, a postwar high.

These statistics are a heartening sign to the stockholders, the Reconstruction Finance Corp. (which has lent the company about $14 million in all and still has $7 million coming), and the Defense Department, which has determined that the Martin plant is a vital part of the nation's production potential. The $5 million net profit is a far cry from the $22.1 million net loss chalked up in 1951, principally because of the beating the company took on the sale of 101 Martin 4-0-4's to Eastern and Trans World Airlines.

As a matter of fact, the 1952 net would have been even higher had the company not been required to show an additional $2-million-plus loss on the commercial airliners during last year's first quarter.

Another sign of the company's rapid recovery since its dark days a year ago is the debt, which has been whittled down from $42 to $25 million. This was accomplished through the sale of the 2-0-2's it had on hand ($5 million worth), a $25,000 hike in the price of each 4-0-4 ($2.5 million), the sale of $6 million in debentures, and the acquisition of $3.5 million by other means.

All of this has transpired since last February, when George M. Bunker, a vice president of Trailmobile, Inc., a Pullman subsidiary in Cincinnati, was brought in as Martin's new president and later as its chairman. With him from Trailmobile came Bradford Wharton, Jr., as vice president-finance.

No Magic

These two, working with the old management (including former president C. C. Pearson, now vice president-operations), have brought the company from the brink of bankruptcy to its present position. Bunker claims, however, that he has worked no magic, that 1951's loss made a net profit inevitable in 1952, and that his principal asset to the Martin organization was that he was the individual on whom all opposing factions could agree.

Nevertheless, the fact remains that Bunker and Wharton have taken at least two concrete steps which will enable the Martin company to keep getting healthier.

- **A determination** that as many military contracts as possible will be signed under a fixed-price agreement, rather than under the more conventional cost-plus-fixed-fee pacts.
- **A decision** that Martin is through with "prestige" contracts which cost the company money.

While many aircraft firms, unable to estimate their costs on developmental work, prefer the cost-plus-fixed-fee to make certain of at least some profit, government procurement regulations provide that a much higher margin is permissible in the case of a large number of planes, missiles, etc., which are promised at a fixed price. Bunker and Wharton think they can evolve a good fixed-price formula which will enable their company to take advantage of the higher profit margin (up to 10% before taxes). Of course the danger in a fixed-price contract is that the company will underestimate its costs and thus lose money on the job.

No 'Prestige' Jobs

Bunker's point on "prestige" contracts, or those taken to keep the plant busy, is that no company can afford to handle them. He cites the 2-0-2 and 4-0-4 airplanes, which had a total development cost of about $76 million before tax credits.

"Enough of our equity has gone to build up the airlines," he says. "We have no further intention of carrying the risk for the customer. Our job is to build airplanes, not finance the airlines."

Does that mean that Martin is through with commercial airplanes? Or is there some factor which would prompt the oldest airplane company in the business to build airliners again?

Says Bunker, "Circumstances would have to change very markedly. Specifically, all development costs will have to be borne by the airlines." The Martin president-chairman confides, however, that his firm has been engaged in studies of a long-range commercial jet transport for some time and that about four of the company's research engineers are working full time on the project.

He declares the Martin jet design is partially based on a Navy airplane and would be launched from the water, adding that a brochure to be shown to the airlines may not be too far off. He estimates the development and testing cost of two to three prototypes at about $40 million.

"It would not be quite fair, however, to state that Martin has much more than an academic interest in a jet transport at present," Bunker concludes. His statement on refusal to take contracts which will keep men busy while the company loses money on the deal is pointed up by the fact that Martin's employment has dropped from about 24,000 a year ago to about 20,000 at present, due mainly to the phase-out of

the 4-0-4. But with the increasing tempo of military work, Martin expects to have some 25,000 on the company payroll by the time 1953 ends.

Surprisingly, the backlog of military work, according to Bunker, is split almost evenly between the Navy and Air Force, despite the fact that the Navy has cognizance over the Martin plant and Martin has been considered basically a builder of Navy aircraft.

Bunker

At the present time Martin is producing the B-57 Canberra light bomber and B-61 pilotless bomber missile for the USAF, and the P5M-1 Marlin patrol bomber and Viking research rocket for the Navy. In addition, it has a development contract for the XP6M-1 Seamaster, a jet-powered flying boat now designed for minelaying operations. The KDM-1 Plover, a target drone, is no longer in production.

Over the Christmas holidays, Martin completed transfer of the P5M-1 line to the building where the 4-0-4 was formerly built. (All of the 4-0-4's have been completed and the last three are slated to be delivered to Eastern before the month is out.) This transfer, which now consolidates all Marlin construction in one building, is another attempt to reduce operating costs.

Reduced costs, plus the advantage of some $40 million in tax carry-forward credits as a result of losses on the 2-0-2 and 4-0-4, will enable Martin to ignore Federal income taxes on earnings up to the $40 million, in other words probably through 1956 or 1957. These earnings will be used to reduce Martin's indebtedness to the RFC and the group of banks which provided government-guaranteed V-loans and $3 million in commercial loans.

Before almost all of the current $25 million debt is paid off, there is little likelihood that Martin's stockholders will see any dividends. To pay even a token dividend before its debts are cleared up, Martin would have to get permission from both the V-loan and commercial banks and the RFC. While this is unlikely, the present backlog and current rate of sales foreshadow a 1953 and 1954 net of $10 million each year—almost enough, if everything goes well, for the company to become a payer of dividends again. Martin's stockholders have not received a dividend since 1947.

Wharton

One other reason for Martin's finding the road back to the black side of the ledger is its planned diversification. In addition to its bomber, missile, rocket, and patrol plane work, the company is busily engaged in electronics work (fire control systems, radar control) for the Army Signal Corps, as well as the Navy and USAF. Approximately 25% of Martin's 2,000 engineers are now working on electronics projects.

Incidentally, the company expects to hire another 500 engineers before the year is out to concentrate on research and development rather than production engineering. If this happens, it will mean one out of every 10 Martin employes (2,500 out of 25,000) will be an engineer.

These research engineers are working to keep Martin well represented in future military contract awards in several fields:

• **Missiles:** In addition to improved versions of the B-61 Matador, the company is well advanced on planning for longer-range missiles and more accurate guidance systems.

New Marlin

• **Water-based aircraft:** A new version of the Marlin, the P5M-2, is definitely in the works and should make its first flight sometime this summer. The -2 will differ from the current production model in that it will have a T-shaped tail (somewhat similar to the one on the Martin XB-51 light bomber). One later feature to be incorporated in the -2 will be a new bow chine which will change the plane's spray pattern and help eliminate the bulbous appearance of the radar-packed nose section.

Martin is also working up design studies on a seaplane fighter, roughly similar to the Consolidated Vultee XF2Y-1 Sea Dart, which is now undergoing its first tests. Martin, however, did not participate in the design competition which Convair won, company officials declare. One other water-based design would be the commercial (and military?) jet transport.

• **Bombers:** Company planning at present is limited to the B-57, which, while it will resemble the English Electric Canberra externally, has been 80% redesigned from British specifications. While current production will be the B-57A, whose first flight is scheduled for this spring, Martin already is planning various modifications and B-57B's, C's, and D's are already either definitely scheduled or on the drawing boards.

All versions of the Canberra are scheduled to be powered by the Curtiss-Wright J65 Sapphire (now rated at 7,200 pounds thrust), Bunker has indicated, although substitute engines with higher thrust ratings have been informally discussed.

As some of these plans materialize in the form of Navy and Air Force contracts, the Martin organization will have a skilled work force capable of handling the jobs. Laber turnover has been dropping steadily as 4-0-4 work diminished and a good percentage of the work force is made up of long-time employes. Of the current 20,000 on the payroll, for example, some 6,150 have been with Martin for 10 years or more, and nearly 1,100 have drawn Martin paychecks for at least 15 years. • • •

Shuttle Service by New York Airways

New York Airways, the certificated helicopter carrier serving the New York metropolitan area, will provide an inter-airport shuttle service for Air Cargo, Inc., starting January 15. The airmail carrier has signed up as a contractor for Air Cargo, Inc., the wholly-owned airline cargo organization, to supplement current trucking services connecting Idlewild, LaGuardia, and Newark Airports.

With an average mail load of 600 pounds, New York Airways has an average of 1,000 pounds capacity available for cargo. It can provide connecting service in 18 minutes, in contrast to an average of four hours by truck.

New York Airways is also in the process of joining Air Cargo, Inc., and becoming a common carrier for cargo. In time it is expected that the carrier will handle air express. No passengers are carried by the helicopter operation.

NEWS BRIEFS

A third quarter net of 10 cents per share, or $131,909, is the word from **California Eastern Airways.** For the first nine months, net profit stood at 85 cents per share, up sharply from 11 cents per share for the same period in 1951.

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Sales of common stock in **New York Airways** should raise one million dollars, according to the calculations of that carrier. Money would go into new equipment, most likely versions of the S-55's which it is now operating. Carrier plans passenger service eventually.

• •

California flyers can expect **aircraft registration, taxation,** and a **tax on fuel,** if the Advisory Committee to the California Aeronautics Commission has its way. The committee has just recommended those measures by a "decided majority."

Air Transport Industry

1952 Traffic and Financial Results

The following tabulations represent year-end financial and traffic estimates for the U. S. airline industry as prepared by Dr. Lewis C. Sorrell, of the Air Transport Association, and commented on extensively in the Newsletter of AMERICAN AVIATION, January 5. First official figures will be released exclusively in the April "Air Transport Progress Issue" of AMERICAN AVIATION.

THE 14 DOMESTIC TRUNK LINES

TRAFFIC:

Scheduled Services:	1951	1952	% Change
No. Rev. Pass.	20,604,927	22,532,664	+ 9.3%
Rev. Pass.-Miles (000)	10,212,724	12,012,000	+ 17.6%
Mail Ton-Miles	62,927,468	68,761,852	+ 9.3%
Express Ton-Miles	40,261,510	39,222,547	— 2.6%
Freight Ton-Miles	100,601,004	115,514,200	+ 15.0%
Excess Baggage Ton-Miles	9,679,999	11,412,400	+ 17.9%
Total Revenue Ton-Miles	1,196,289,784	1,393,277,000	+ 16.4%

REVENUES & EXPENSES:

Passenger	$569,354,543	$664,841,760	+ 16.7%
Mail	37,304,417	36,515,340	— 2.1%
Express	14,683,925	15,346,480	+ 4.5%
Freight	21,082,744	25,413,140	+ 20.5%
Other	14,880,667	14,896,580	+ 0.1%
TOTAL OPERATING REVENUES	$657,306,296	$757,013,300	+ 15.2%
TOTAL OPERATING EXPENSES	$552,581,284	$662,661,300	+ 19.9%
NET OPERATING INCOME:	$104,725,012	$ 94,352,000	— 9.9%

NOTE: The 1952 traffic estimates are based upon 10 months traffic reports, and the financial estimates upon nine months revenues. The total revenue ton-miles are from scheduled services only; the revenues however, include both scheduled and non-scheduled services. The net operating income does not include federal taxes, and other non-operating income and expense.

• • •

LOCAL SERVICE CARRIERS

TRAFFIC:

	1951	1952	% Change
No. Rev. Pass.	1,520,892	1,719,204	+ 13.0%
Rev. Pass.-Miles (000)	311,429	338,123	+ 8.6%
Mail Ton-Miles	783,989	921,091	+ 17.5%
Express Ton-Miles	901,413	849,650	— 5.7%
Freight Ton-Miles	915,504	1,102,245	+ 20.4%
Total Rev. Ton-Miles	32,716,080	35,472,986	+ 8.4%

REVENUES & EXPENSES:

Passenger	$ 16,061,466	$ 18,596,765	+ 15.8%
Mail	17,926,252	20,262,000	+ 13.0%
Express	355,599	391,000	+ 9.9%
Freight	307,196	369,252	+ 16.8%
All Other	795,514	800,000	+ 0.6%
Total Operating Revenues	$ 35,446,027	$ 40,419,017	+ 14.0%
TOTAL OPERATING EXPENSES	$ 35,493,304	$ 41,635,000	+ 17.3%

NOTE: Estimates for 1952 based upon nine-months traffic reports and 6 months revenue and expense reports. For the first six months of 1952 operating expenses exceeded operating revenues by $1,002,244. No account is taken of any retroactive mail awards taken into the accounts during the last half of 1952, if any.

THE 11 U.S. INTERNATIONAL AIRLINES

TRAFFIC:

Scheduled Services:	1951	1952	% Change
No. Rev. Passengers	2,030,426	2,243,300	+ 10.5%
Rev. Pass.-Miles (000)	2,599,031	3,000,000	+ 15.4%
U. S. Mail Ton-Miles	21,980,111	21,736,000	— 1.1%
Foreign Mail Ton-Miles	5,028,816	5,632,000	+ 12.0%
Cargo Ton-Miles	70,690,847	74,240,000	+ 5.0%
Total Rev. Ton-Miles	370,751,696	420,424,000	+ 13.4%

OPERATING REVENUES:

Passenger	$184,685,168	$209,432,000	+ 13.4%
U. S. Mail	55,448,109	52,404,904	— 5.5%
Foreign Mail	10,106,448	10,420,972	+ 3.1%
Cargo	24,751,399	26,855,319	+ 8.5%
Excess Baggage	3,701,374	4,330,554	+ 17.0%
Total rev. from scheduled operations	$278,692,498	$303,443,739	+ 8.9%
Total rev. from non-scheduled operations	$ 3,675,964	$ 4,000,000	+ 8.8%
Total rev. from transport operations	$282,368,462	$307,443,739	+ 8.9%
TOTAL OPERATING EXPENSES	$266,855,234	$302,339,000	+ 13.3%
NET OPERATING INCOME	$ 15,513,228	$ 5,104,739	— 67.1%

NOTE: Based upon nine months reporting of both traffic, revenues and expenses in calendar year 1952. The revenues reported for 1952 do not include awards of back mail-pay for the period from April 1948 to September 1952 to Pan American, amounting to $3,000,000. Nor do they include incidental non-transportation revenues.

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THE IRREGULAR SERVICE CARRIERS

	1951	1952	% Change
No. of Pass.	638,386	718,184	+ 12.5%
Rev. Pass-Miles (000)	1,080,369	1,307,250	+ 21.0%
Cargo Ton-Miles	80,850,000	77,616,000	— 4.0%
Total Rev.	68,338,311	85,422,911	+ 25.0%
Total Expenses	62,860,991	82,347,898	+ 31.0%

Estimates for 1952 are based upon the percentage of increase in the first nine months of 1952 as compared with the same period for 1951.

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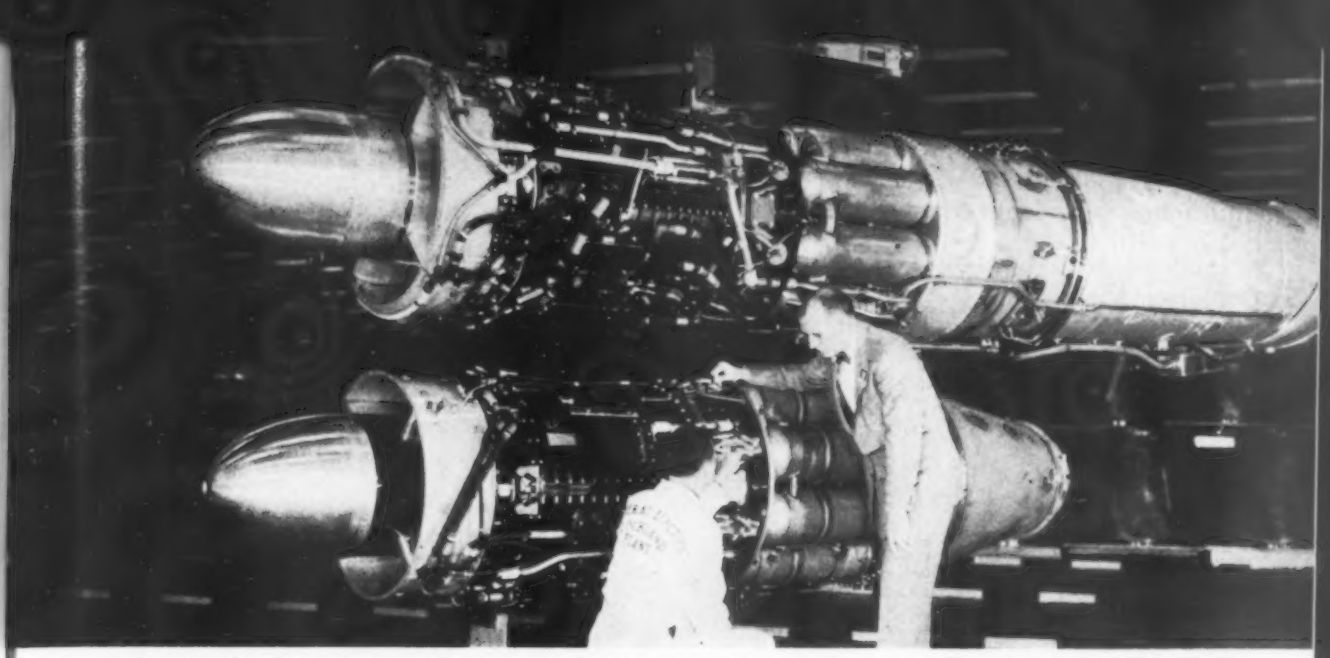
THE CERTIFICATED CARGO CARRIERS

	1951	1952	% Change
Rev. Freight Ton-Miles	105,888,000	97,500,000	— 7.9%
Total Operating Rev.	$ 17,798,025	$ 17,550,000	— 1.4%
Total Operating Expenses	$ 15,046,428	$ 16,575,000	+ 10.2%

NOTE: 1952 estimates based upon first nine months reports. No figures are available regarding U. S. Airlines in 1952. Estimated revenue ton-miles for the last quarter of 1952 are 29,500,000, or about 10% under the same quarter for 1951.



USAF SPEED CHAMP, G-E J47 is shown with afterburner and without. Even without afterburner, the engine develops over 5200 pounds of thrust

G-E J47 Powers USAF Planes to Two Speed Records

North American F-86D Sets New World Mark, Boeing B-47 Shatters Honolulu–San Francisco Record

Still helping re-write the aviation record book, General Electric's J47 turbojet powered a North American F-86D Sabre and a Boeing B-47 to new speed records within the space of one week. Making four low level runs on the three-kilometer Salton Sea, California course, the F-86D (with afterburner) racked up an average speed of 699.9 mph—a new world's speed record. Just a few days later, a six-jet Boeing B-47 (without afterburners) set an unofficial record for the Honolulu–San Francisco run of 4 hours, 32 minutes.

The F-86D and B-47 engines are first cousins to the J47's which power the Sabres in Korea. The afterburner version is equipped with all-electronic control which automatically regulates fuel through both the engine and the jet exit area. This means optimum performance under all conditions with much less pilot attention.

Designed and built by General Electric, the world's largest known manufacturer of jet engines, the J47 is assured peak performance by G.E.'s world-wide service engineering organization. This group provides on-the-spot technical assistance and supervision to users of the J47 no matter where they may be.

Tops in speed at home, tops in combat performance abroad, the J47 is America's top mass-produced jet engine. General Electric Company, Schenectady 5, N. Y.

210-66

You can put your confidence in—

GENERAL ELECTRIC

RECORD RUN of F-86D was made under rules of the Federation Aeronautique Internationale and the N.A.A. Average speed: 699.9.

Industry Gets Raw Deal on RR Freight Rates

Railroads get 15 times as much per ton from aircraft manufacturers as from comparable shippers, says AIA.

By James J. Haggerty, Jr.

REPUBLICAN Congressmen and Administration leaders looking for ways to save the taxpayer some money might well direct some attention to the cost of shipping aircraft parts by railroad. This is the opinion of the Aircraft Industries Association, which is currently waging a battle to have the rates for such shipments lowered.

The post-Korea expansion and the resultant "broadening the base" program heightened the problem of what AIA terms "excessive" charges by the railroads for shipment of aircraft parts. A manufacturer in Dallas, for instance, might have to ship a wing section to a prime contractor as far away as Seattle. The annual cost of shipping parts around the country has not been determined because of the tremendous bookkeeping task involved, but it is easy to see, with thousands of subcontractors shipping parts all over the country every day, that it runs into big money.

It follows, then, that any reduction in the railroad rates would result in a substantial reduction of the cost of the finished airplane, hence a saving to the taxpayer. AIA thinks that they can be reduced 40% if the railroads will adopt a more realistic pattern of rate determination.

Twice as Much

As it now stands, the railroads earn more than twice as much per car, and more than 15 times as much per ton, in hauling aircraft parts as they average for hauling all other commodities.

"No other commodity handled in volume on the railroads is assessed rates as high as aircraft parts," says Adm. DeWitt C. Ramsey (USN-Ret.), AIA president. "Establishment of rates consistent with those charged for transportation of other goods would result in savings of millions of dollars, not only to the aircraft industry but to the Defense Department and the taxpayer."

The major reason for the "excessive" charges on aircraft parts is the fact that the prime basis for rate determination by the railroads is the valuation of the goods shipped. The complexity and difficulty of production of aircraft parts, of course, put them at the top of the heap as far as valuation is concerned. But the question is whether this is a legitimate way of determining shipping costs.

Here is a typical example to back up AIA's charges that aircraft parts are being assessed twice as much per car and 15 times as much per ton: A subcontractor in Dallas is building wing sections for a prime contractor in Wichita. The railroad earnings per car-mile for this particular shipment are 77.4 cents. The average earnings for all commodities in that same railroad district (Western District) are 35.4 cents per car-mile. On a ton-mile basis, the comparison is even more striking: the average ton-mile revenue for the entire Western District is 1.3 cents; for the Dallas-Wichita aircraft parts shipment it was 25.8 cents!

Bulk Rates

Another inequity in the matter of parts shipments (and this does not include aircraft engines, which are treated in another rate category) is the matter of car loading. In the case of some types of shipments, such as furniture, the railroads recognized the fact that the bulk of the equipment would preclude loading the car to its minimum weight limit (10,000 pounds in the case of a standard 40-foot car); a carload of furniture would weigh only 6,000-8,000 pounds. Accordingly, the railroads made allowance and charged furniture shipments at the rate of only 85% of the first class rate.

In the case of aircraft parts, the bulk is even greater on shipments of items like wing, tail, and fuselage sections. Aircraft shipments of these parts run about 6,000 pounds to the 40-foot car, and have been as low as 3,000 pounds in a 50-foot car, where the minimum weight is 16,200 pounds instead of 10,000. But no allowance similar to that made for furniture has been made in the case of aircraft parts. Quite the contrary—instead of the 85% of first class rate charged furniture, the standard rate for aircraft parts is 125% of first class!

AIA is asking for the 85% rate, or a reduction of 40% in the present rate, but the decision is tied up in endless litigation. The industry filed a complaint with the Interstate Commerce Commission in 1950, but ICC ruled to withhold a decision in the aircraft industry case until it decided a case filed in 1946 by the Government in which the Government was trying to recover excessive transportation charges during World War II.

Realizing that this case might drag on forever, AIA, with Air Force backing, recently filed a new petition, asking that the aircraft industry case be separated from the Government case and an early decision awarded. No action has yet been taken on this petition. Meanwhile, parts are being shipped daily at a rate 40% in excess of what the industry considers reasonable—one more reason for the high cost of aircraft. • • •

Helicopter Training Aid Developed

Prototype of a helicopter training aid for use by the Navy for classroom training of operations and maintenance personnel has been completed by Grand Central Aircraft Corp., special devices division, in Glendale, Calif. Called the HTE-2 unit, the trainer consists of a series of five panels which simulate the components of the following systems: flight control; rotor; rotor drive; fuel, oil and engine control; and exhaust air intake and cooling.

NEWS BRIEFS

Three more DC-6B's, for a total of eight, have been ordered by **Western Air Lines.** Delivery, according to president T. C. Drinkwater, is due in mid-1954.

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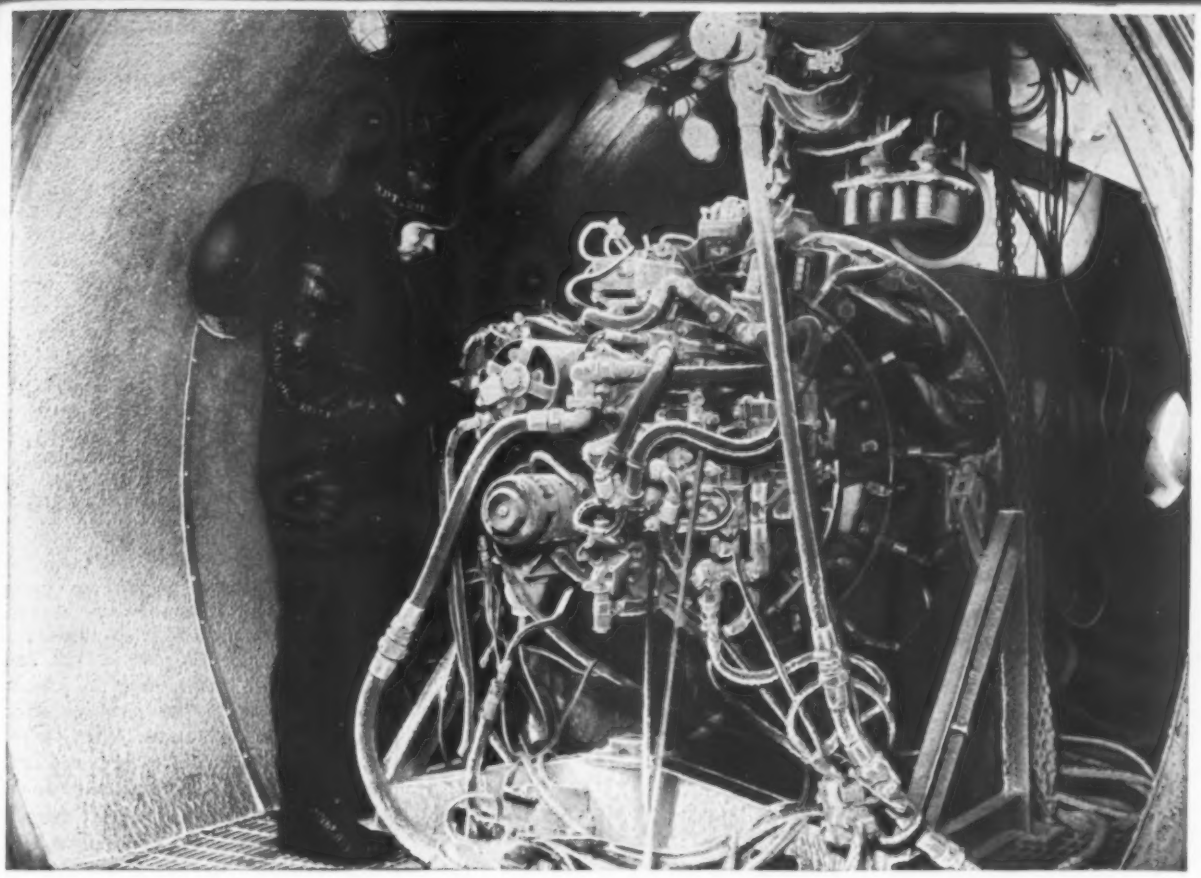
An **Eastern Air Lines** Super Connie will be leased to **Northwest Airlines** for a daily Chicago-Seattle round trip. Flown west of Chicago by NWA crews, the aircraft will provide more than 9.2 million seat-miles monthly, subject to CAB approval.

• •

Twelve American Airlines DC-6B's will be **converted to coach interiors** by Lockheed Aircraft Service, with eight of them going from the present 70-seat configuration to an 80-passenger design and the remainder being changed from a standard interior.



It never gets this cold upstairs

***Up** in jet country—10 miles above the earth—it gets mighty cold.*

Even when these planes are operating only two or three miles up, temperatures drop below zero. And when they reach their ceiling, the thermometer stands at about minus 67 degrees F.

Because jets range far, wide and high, we have to be certain the engines will start at even the lowest temperatures and perform well where the air is thin. So here at Allison we have testing facilities which put our turbine engines through every temperature extreme they'll meet in the air.

In the low-temperature-starting test chamber shown above, designed and built by Allison, the toluol (can't use mercury at these low temperatures) drops to 100 degrees below zero — far colder than the lowest temperature the jets will ever encounter. And prior to these tests of the complete engine, we check the various systems and parts to be sure that they will perform properly under the most severe atmospheric conditions of temperature, altitude, humidity—even including exposure to sand, fungus and salt spray.

In addition to these laboratory tests, our engineers are assigned to anti-icing tests of Allison engines at Mt. Washington, New Hampshire, cold-starting tests at Ladd Air Force Base, Alaska, and low-temperature tests of the complete airplane in the huge cold chambers at Eglin Air Force Base, Florida.

Climatic testing is just part of the extensive test program for our engines—tests that meet or exceed military specifications. This comprehensive testing, coupled with our continuing program of design improvement, is another reason why pilots put their confidence in Allison jets.

GM GENERAL MOTORS

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INDIANAPOLIS, INDIANA

***World's most experienced designer and builder of aircraft turbine engines*—J35 and J71 Axial, J33 Centrifugal Turbo-Jet Engines, T38 and T40 Turbo-Prop Engines.**

Delta/C&S Merger Seen Final by Early Spring

Delta Air Lines and Chicago & Southern Air Lines hope to consummate their merger agreement in late March or early April, following recent Government approval of the deal. Both CAB and President Truman put their stamp on the agreement, under which C&S will be merged into Delta to form what officials of the two firms estimate will be the sixth largest airline in the country.

Aside from a great deal of paper work, the main obstacle remaining before consummation is the winning of stockholders' approval. Meetings for this purpose are expected during March.

Agreed Last April

The companies agreed to merge last April, with Delta to pay approximately $10 million in 5½% debentures in exchange for C&S stock. The new firm will have home offices in Atlanta, present site of Delta's general office. Company will operate as Delta-C&S Air Lines, although for some routes the name Delta Air Lines will be retained.

Three members of CAB, Chairman Ryan and Members Lee and Adams, approved the agreement unanimously, with the other member of the current four-man panel, Chan Gurney, not taking part. Their decision is subject to the carriers gaining stockholders' approval and complying with various employe protective provisions. Following evidence of this, CAB will reissue the certificates of the lines to the merged firm.

New Final Mail Rates

CAB indicated it contemplates issuing orders establishing new final mail rate orders putting the merged domestic system on the non-subsidy 53¢ per ton-mile rate for Class II carriers and possibly setting a different rate for the C&S international route than currently exists. Delta is now on the 53¢ rate although both C&S' domestic and international systems are subsidized.

President Truman's approval of the transaction was necessary, since C&S' international routes are involved in the transfer. This is the third merger of domestic trunk-lines approved by CAB in the past year and, if approved by stockholders, will lower the number of domestic trunks to 13. Other mergers were Braniff and Mid-Continent, in which Braniff survived, and Western-Inland, in which Western survived.

One for all

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it's the REMINGTON

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typewriter for their

CORRESPONDENCE
SPECIFICATIONS BLUEPRINTS
CHARGE ORDERS BILLS OF MATERIALS
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A veritable stream of paperwork starts flowing the very second Glenn L. Martin Company receives a contract to design and build a plane. Preparing all this paper may well be compared to the actual building of the plane... *standardization, quality, accuracy, uniformity and interchangeability are all of paramount importance.* That's why you will find Remington Electri-conomy typewriters at work throughout the Martin plant in Baltimore.

Increased typing production . . . handsome, uniform typescript... 16 or more crystal clear carbon copies at *one* typing... sharp, clean stencils... and a new high in operator morale because of its amazing electric ease of operation are just a few of the many Plus-Values to be experienced with the Electri-conomy.

Send for FREE Booklet, "TAKE A LETTER" (RE 8499). Address requests Room 2573, 315 Fourth Ave., New York 10.

Remington Electri-conomy Typewriters at work at the Glenn L. Martin Co.

Remington Rand INC. THE FIRST NAME IN TYPEWRITERS

INADVERTENT propeller reversing is prevented by reworked governor, Hamilton Standard model 5U18-12, shown on test P&W R-2800 engine.

New Reverse System Ready & Waiting

Greater safety built into new Hamilton Standard prop systems, which may be made mandatory.

WINDSOR LOCKS, CONN.—Hamilton Standard Division, United Aircraft Corporation, has developed two new propeller safety systems to prevent inadvertent propeller reversing. The firm will incorporate the systems as an optional feature into its new governor, model 5Y20, for the Douglas DC-7, and will make both available for the 5U18 governor now in use on the DC-6, the Martin 2-0-2 and 4-0-4, the Convair 240 and 340, and the Constellation.

- **Six converted 5U18 governors** have been built and are awaiting voluntary service testing . . . but none of the airlines has made a decision to undertake the tests.
- **CAA has proposed** that the installation be made mandatory, a proposal which is expected to meet with the united opposition of the airlines and the support of the Air Line Pilot's Association, and bring about a meeting of the parties involved before the issue is settled.

In the event of a mandatory requirement by CAA, Hamilton Standard expects to be able to supply the parts at an early date. The DC-7 model has completed some 200 successful hours of company testing and CAA type tests are expected to be in full swing soon, Ray Lambeck, chief product engineer, has said. When the basic principles have been proved in these tests, CAA approval for subsequent units, including the modified model 5U18, called the 5U18-12, is expected to be routine, according to Lambeck.

The cost of the conversion kits, however, will be no small item. Hamilton Standard estimates run from $600 to $800 per engine, making the conversion dollar sign on such a fleet as American Airlines' DC-6's and Convair's from $250,000 to $350,000. A new governor including the safety features is estimated to cost from $1,200 to $1,600.

That Hamilton Standard should build such added safeguards against prop reversals is not surprising, considering the amount of public attention given to this problem. Notable among the incidents have been:

- **The National Airlines** crash at Elizabeth, N. J., February 11, 1952, in which 33 persons were killed. After the crash, the CAB said the probable cause was "reversal in flight of number three propeller with relatively high power, and subsequent feathering of number four propeller, resulting in a descent at an altitude too low to effect recovery."
- An article in the October, 1952, *True* magazine, which produced many repercussions in government, industry, and the public when it gave its version of various "propeller reversal" incidents in a story titled "The Secret Gamble That Can Kill You."

ALPA Suggestions

Also alarmed, the men who fly the planes with the much-discussed propellers (Ham Stan general manager Erle Martin has said that 90% of all commercial transports built in the U. S. since World War II are equipped with reversible Hamilton Standard props) went to work in early March of this year and came up with an idea for making the reversing system safer. These engineering-minded pilots of the Air Line Pilots Association, including Charles Daudt and "Bull" Durham, working with American Airlines' engineer Dave Hayes, drew a diagram of what they thought they needed.

They showed it to the CAA and it liked it.

Then it was passed along to the designers here, arriving on the 25th of March.

Lambeck thinks perhaps some kind of record was established, since his crew of 12 engineers found an answer so soon that a working model was ready for CAA testing within eight months after the simple line diagram arrived.

For a clear idea of just what was accomplished on the engine, it is necessary to define the point from which the designers started, namely, the old system, as in the 5U18.

EASY STREET – 1953

While you're making resolutions for the new year, here's one that's bound to broaden your horizons. Resolve to travel the broad blue *high* way TWA Skyliners fly.

It can be your road to greater success in business; your pathway to greater pleasure during vacation days ahead. Swift, dependable TWA Skyliners can help you *see more* and *do more* no matter where in the world you go.

Where in the world do you want to go? For information and reservations, call TWA or see your travel agent.

ACROSS THE U.S. AND OVERSEAS . . . FLY **TWA**

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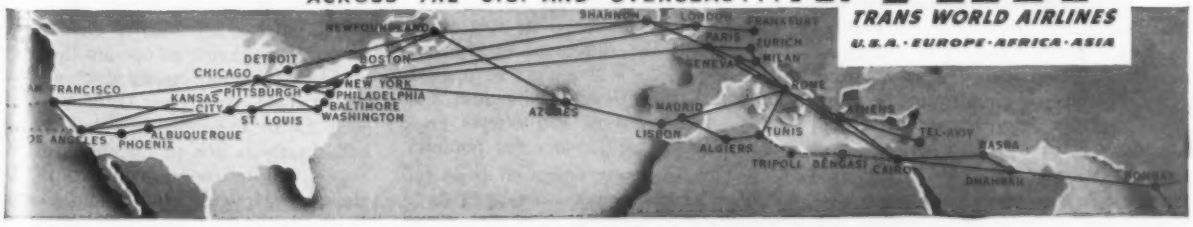

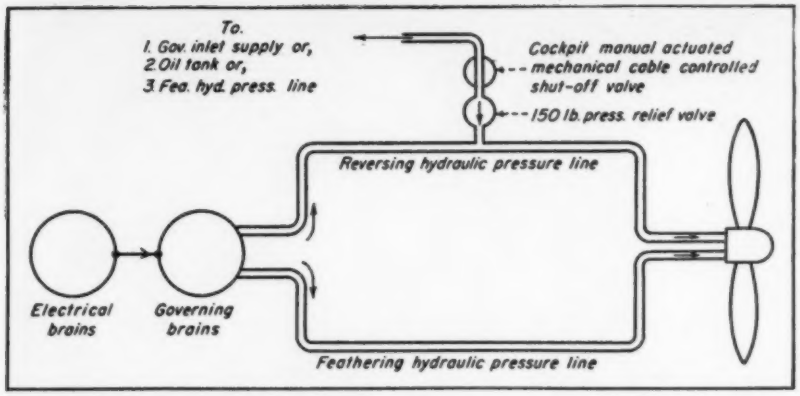

ORIGINAL SKETCH of system redesign, above, proposed by Air Line Pilots Association, led to Hamilton Standard project and governor rework.

• **In the old system,** before the blades can be moved into reverse pitch, a pressure higher than the normal 80 psi operating pressure is needed in the propeller dome. A total of some 250 psi is required for the reversing operation. This is built up by closing off the overflow action of the *single* low-pressure relief valve in the closed circuit. With this single relief valve closed, pressure builds up and oil is directed to the side of the master cylinder in the prop dome giving low pitch.

When the 250 psi figure is reached, the restraining small "low pitch" track-end stops are automatically side-tracked, and the pressure forces the blade cam to travel past the "low pitch" position to the end of the master cylinder fluting to the "reverse."

In ordinary flight, including the low-pitch position, the master cylinder never gets past the stops (if everything is functioning properly) because the pressure never approaches 250 psi and the stops block the way to reverse.

• **In the new system,** a second low-pressure relief valve is inserted in the same hydraulic closed circuit as above. As before, 80 psi is normal and 250 psi is the reversing pressure, and the stops work the same. But this time it is necessary to close both valves before a pressure build-up can take place. The internal piping is such that if either valve is closed, there is no possibility of engine overspeed, as might have happened in the original ALPA proposal, said Lambeck.

The electrical controls for these two relief valves are wired in series, making the end result practically foolproof against actuation with a stray hot lead. Now the electrical circuit must be closed in two places before either valve will operate, according to Lambeck.

One extra electrical lead is required for the new system and it is understood that some airlines are installing this wire on each engine when their planes are in for overhaul. The CAA, which will soon decide exactly what it will say is needed along this line, has recommended this.

What the airlines, the manufacturers, or the CAA feel the minimum cockpit installations of the twin switch controls are, is not yet known. But when the pilot throws the reverse switches, whether he throws them both after the wheels have touched the ground or the first one as he turns the base leg and the second after the touchdown, he has to allow about two to three seconds after the second signal before he can get full reverse.

Feathering Problem

The other main problem to conquer on the reversing front, as pointed out earlier, is *feathering*.

To this end, Hamilton Standard has made use of a very simple physical truth, and consequently the action of feathering will take precedence over the action of reversing.

Translated into what the pilot might expect, this means that if for some unknown reason an engine reversed its prop pitch, the pilot could feather the prop with the same oil pressures the engine used to go into reverse.

The design which gives this dominant action to feathering is a two-faced piston which has its larger face acting for feathering and the smaller face acting for reversing. Any time the pilot desires to feather, he just opens a valve permitting the same oil for reversing to flow around to the other side of the piston, and the difference in the two opposing forces will always be towards the feathering direction, because that piston face is larger and accepts more square inches of pressure (or pounds).

The feathering operation from full reverse to feather takes about 10 to 12 seconds, and half that time to go from the normal operating ranges to feather.

A few of the statistics of the new 5U18 governor are:

• **The engine base plate** is 9/16" higher than the present irregularly shaped length and width, which will both increase from one to two inches.

• **Some 37 different kinds of parts** are in the conversion kit, six of which are new designs; the remainder are replacements.

• **Excluding the head section,** which stays the same in the 5U18-12, about 80 other base and body parts remain the same.

• **The present 5U18** weighs 13.7 pounds and will gain about four pounds in the -12 model.

Hamilton Standard has not made either of these two safety systems mandatory in its designs which are adapted to include them, and either feature can be blocked off with plugs. • • •

Domestic Routes Due For TCA North Stars

Trans-Canada Air Lines will withdraw its Canadair North Stars from overseas routes when delivery of its eight Lockheed L-1049 Super Constellations is completed (in 1954). This will enable the 23 North Stars to be used exclusively on domestic routes along with TCA's 27 Douglas DC-3's.

The airline has completed 75% of its program to convert the North Stars from 40- to 48-seat planes. In 1952 TCA carried some 1,125,000 passengers, 20% more than in 1951. Air cargo and express volume was up 27%.

BOAC May Release Six Britannias to Qantas

British Overseas Airways Corp. has offered to let Qantas Empire Airways have six of the Bristol Britannia turboprop transports ordered by BOAC, provided the Australian flag carrier places an order with the Bristol Aeroplane Co.

Acceptance of this offer would enable Qantas to obtain the planes at least a year earlier than if BOAC took delivery of all its 26 aircraft first. The BOAC offer is intended to enable both carriers to continue to operate the same type of equipment on the England-Australian route. At present both use Lockheed L-749 Constellations, but Qantas will shortly switch to Lockheed L-1049 Super Constellations, whereas BOAC plans to operate Britannias and Comets on the route.

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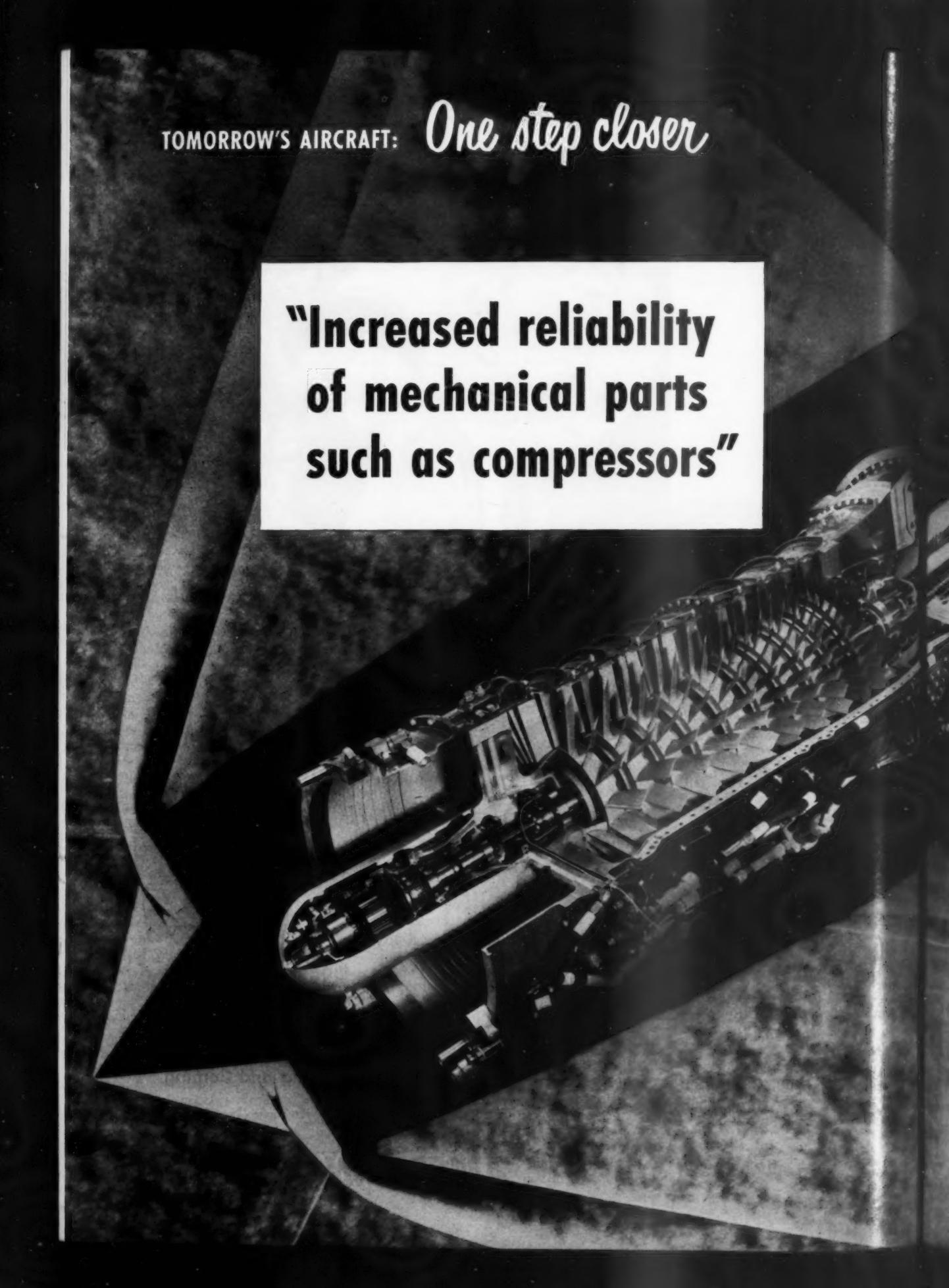
AMERICA'S LEADING AIRLINE

AMERICAN AIRLINES INC.

TOMORROW'S AIRCRAFT: *One step closer*

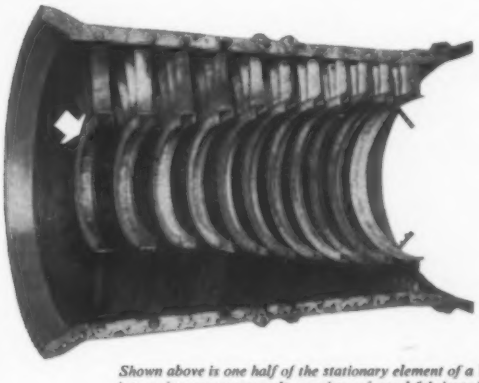
"Increased reliability of mechanical parts such as compressors"



Westinghouse early recognized the need for extra reliability of compressor stationary diaphragms. Today, Westinghouse stands first for their contribution in stationary or stator blade design and construction. How well they have developed a thoroughly dependable shrouded steel stationary blading on the compressor is dramatically demonstrated by Banshee performance over Korea. For the fact is . . . there has not been a single operational loss of the Banshee (with Westinghouse J-34 turbojet engines) because of stator blade damage. Breakage at this point would be serious of course, ripping out all the other blades in the compressor. Westinghouse construction avoids a complete break, the blades may bend if hit, but won't tear out . . . both ends hold tight to the shroud.

Lighter, more durable jet engines, like the powerful, new J-40 which recently passed the Defense Department's grueling 150-hour qualification test, will aid our country's defense. Though other jet aircraft problems remain to be solved, Westinghouse axial-flow design, proved over Korea, points the way to the solution of future jet fighter and transport problems.

Westinghouse is investing millions of dollars and man-hours to help build American jet-propulsion leadership. Jet engines are produced at South Philadelphia and Kansas City plants by Westinghouse, America's Jet Engine Pioneer. J-91002-A



Shown above is one half of the stationary element of a Westinghouse jet engine compressor. It consists of steel-fabricated diaphragms assembled in machined grooves in a cast aluminum housing. The white arrow above indicates one of the inner steel support shrouds.

THE SCOPE OF WESTINGHOUSE IN AVIATION

Basic aircraft systems

Turbojet Engines, Fire Control, Radar, Autopilots, Communication Equipment and Electrical Systems.

Ground equipment

Wind Tunnels, Airport Lighting, Industrial Plant Apparatus.

Airborne system components

Transformers, Rectifiers, Instruments, Gyro-motors, Temperature Control Panels, Generating Equipment and System Control, Circuit Breakers, Contactors, Motors, Actuators and Hoists, Electronic Tubes, Magamps®, Micarta®.

YOU CAN BE **SURE**...IF IT'S

Westinghouse

ICAO Watchdogs $1½ Million UN Fund

Civil aviation technical assistance projects in 1953 will expand training and development programs.

By ANTHONY VANDYK

SUPPOSE you were given $1,500,000 to spend on helping the less developed nations of the world in the civil aviation field, what would you do with it?

Should you sponsor the training of pilots, build airports, establish technical schools with the money? Is Spain more deserving, than Nationalist China? (Don't forget that, as in every case when there is "something for nothing" in the wind, the clamours of the deserving are often drowned by the shouting of the more fortunate trying to get in on the shell-out).

Don't worry. The answers to these questions (and hundreds more) are being supplied on your behalf by the International Civil Aviation Organization which has been entrusted by the United Nations with the administration of $1,500,000-worth of "technical assistance" in 1953.

It should be made clear that ICAO is not quite a "fairy godmother"; it does not initiate assistance, but approves —or disapproves—applications for assistance.

ICAO has had plenty of experience in this field since 1950 and to date has disbursed well over $1,000,000 in worthy projects outside its regular working program. In two years ICAO has assisted 27 nations and now has 71 experts in the field under the technical assistance program.

Arrangements for technical assistance to the following nations have been negotiated or are under negotiation: Afghanistan, Burma, Chile, Nationalist China, Costa Rica, Cuba, Egypt, Ethiopia, Finland, Greece, Iceland, India, Indonesia, Iran, Iraq, Israel, Italy, Jordan, Lebanon, Liberia, Mexico, Nicaragua, Pakistan, El Salvador, Spain, Thailand, Turkey and Yugoslavia. Moreover, ICAO is participating in a UN technical assistance project for a survey of transportation in Central America.

During the first phase of the program, primary emphasis has been on the development and improvement of ground services—communications, airport development and management, meteorology, and air traffic control.

Following these basic fields the next most frequent type of aid has been in the instruction of mechanics and inspectors for engines and airframes. Advice has also been given on civil aviation organization in governments, air law and regulations, airline operations and accounting, and air transport economics.

No basic pilot training has been given although in a few cases the training of commercial pilots has been sponsored. In Indonesia where the government has employed flying instructors for this purpose, ICAO has provided ground instruction.

Most of the countries requesting ICAO assistance have had advice in the past and possess civil aviation organizations of varying size and proficiency. In these countries ICAO has established centers to train additional personnel or is giving technical advice to improve the quality and efficiency of services now being rendered.

Thailand Pilots

In Thailand three pilots of Thai Airways have successfully completed an instrument flight training course and flight check, and one of the pilots will be trained to act as an instructor. In Indonesia, Thailand and Ethiopia engine mechanics are being trained, while in Israel work is now in progress to train local personnel as aircraft inspectors. Technical assistance of this kind contributes directly to the development of safe and efficient air transport.

There are also nations with a considerable amount of civil aviation already operating but which require advanced technical advice and knowledge of the latest practices in the field. An example is India, where such high-level advice is being rendered in airline cost accounting and telecommunication organization, and Iceland, where a system of radio navigation aids is being installed with the advice of ICAO technicians and local personnel are being trained in its maintenance and operation.

An account of the accomplishments in one nation—Ethiopia—shows the value of the ICAO program. A meteorological service composed of ICAO-trained observers is now operating; radio maintenance students have repaired and improved transmitting facilities; Ethiopian students have passed from the classroom to the workshops of Ethiopian Air Lines where they are undergoing apprenticeship training which will ultimately make new skilled mechanics; and five pilots have been trained abroad and are now returning qualified as airline co-pilots.

An interesting part of the program is the extensive use of mobile synthetic trainers for air traffic control and radio operation. A trainer consists of a number of pieces of equipment which when installed provide for five classrooms and a master control room. The various pieces, such as the airport tower console and the area control boards, are linked up with wire connections, keys, and switches whereby a student may be in contact with students in other positions in the same way as air traffic units and radio operators are in contact with one another in communications and air traffic control centers. The system allows for communication by voice or telegraphy as required. By sending signals and position reports, air traffic control and communications problems can be simulated. The present program calls for the use of five trainers.

This brief round-up of some of the many ICAO technical assistance activities should kill suggestions that in any comparison of need for technical assistance in underdeveloped countries civil aviation should not rank high in relation to agriculture, industry, health or education, perhaps no higher than the position originally assigned to it by the allocation of 1% in the initial UN grant. In fact, the number and type of request received by ICAO indicates that civil aviation should figure much more prominently in the overall technical assistance program.

Governments have assigned a high priority to civil aviation because of the tremendous contribution which it can make in opening up underdeveloped countries and in giving them access to world trade. In addition, they find strong social, political, and administrative considerations for supporting civil aviation development, while the training of their own personnel in aviation is symbolic of their capacity to absorb the technological development of the advanced countries.

In granting technical assistance, ICAO has an advantage in that civil aviation is a concrete, tangible field for action and present straight-forward problems to which technical assistance can be profitably applied. • • •

Lightplane Output

Aero Design and Engineering Co., whose Aero Commander received its CAA certificate about a year ago, has turned out more than 50 of the twin-engined Commanders.

Spark Plugs That Perform LIKE THIS

Will Make YOUR CAR Perform Better!

Official U. S. Air Force Photo

REFUELING IN FLIGHT presents the ultimate demand for flawless spark plug performance—and Champion, a prime supplier to the United States Air Forces, meets it!

Such challenges to Champion research and engineering mean better spark plugs for the American motorist to whom Champion has been the largest supplier for over a quarter century.

When you purchase Champion Spark Plugs for your car you are obtaining the world-famed product of a company which devotes all its research, resources and integrity to the production of spark plugs alone.

There is a Champion Spark Plug expressly developed for *your* car, whatever make or model it may be. Try a set—you will never again be satisfied with ordinary spark plugs.

CHAMPION SPARK PLUG COMPANY, TOLEDO 1, OHIO

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IS A MAJOR SUPPLIER TO THE U. S. AIR SERVICES

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INSTANT TRANSMISSION AND RECEPTION ON 360 CRYSTAL CONTROLLED CHANNELS WITH THE NEW BENDIX VHF RECEIVER... COMPANION TO THE FAMOUS TA-18BB TRANSMITTER.

Now Bendix — and only Bendix gives complete VHF radio communication. Receiving and transmitting can be controlled from a single control panel. No more confusing channel letters — no more conversion charts.

You don't have to crank it. You don't have to tune or fiddle with it. You just select any one of the 360 frequencies you want and there you are. Send or receive.

Light as a feather

Equipment wise, the new Bendix RA18 is light as a feather. Here in one compact unit, complete with power supply . . . it weighs only 18 pounds!

50 KC Channel Spacing

Another Bendix exclusive. Fifty KC channel spacing provides the maximum number of channels available. Eliminates possibility of obsolescence for years to come.

Write for further information

When writing . . . ask about the new Bendix companion transmitter and receiver. The transmitter is the TA18. The receiver is the RA18. Write today.

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Bendix Aviation Radio

CORPORATION fleet ranges from small single-engine planes to large twin-engine equipment flown by a two-man crew.

Corporation Aircraft Seen Vital to Gaylord

Container corporation works its fleet hard in executive service, aerial photography, forest patrol.

By Lois C. Philmus

CORPORATION-OWNED aircraft are just about a necessity for the specialized needs of companies such as the Gaylord Container Corporation, manufacturer of boxes, board, cartons, bags, and paper. With executive offices in St. Louis, Mo., the company maintains its mill and forests in Bogalusa, La., a small town with inadequate rail transportation and more than 70 miles from the nearest airline stop.

Known as the "milk run," Gaylord's planes make innumerable trips between the two points each year, saving the executives incalculable time. During the war the late president of Gaylord, General C. W. Gaylord, was adjutant general for the State of Missouri. On many occasions, L. L. Dorrance, Jr., now the company's chief pilot, flew the General on state business. Impressed by the time saving involved, General Gaylord decided that as soon as aircraft were available for civilian use he would have one at the disposal of his company.

Dorrance

In February, 1945, the first plane, a Cessna UC 78, was purchased, to be replaced by the company's first Beech D-18-S within 11 months. Primarily intended for the General's use, plane service was soon being requested by other members of the company and by March, 1947, a B-25 was added and used until October, 1950, when a DC-3 was purchased as a replacement. In June, 1951, two more Twin Beechcrafts were added to the existing four-plane, twin-engine fleet.

Two single-engine planes now round out the fleet and do the chores of aerial photography, forest patrol, and short-haul transportation required at the Bogalusa mill.

A Beech Bonanza purchased in 1947 to replace a Fairchild which had been in service since June, 1945, is used by the mill for short passenger hauls. The small plane makes as many as three to four round trips a day to New Orleans alone, doubling for forestry patrol when not in passenger service. A Cessna 195 is used exclusively for aerial photography, forestry patrol, and transportation of forestry patrol personnel.

Gaylord's first experience with maintaining its own plane for these services was in 1947, when a North American AT-6 was purchased for these functions. The Cessna took over in March of last year.

Saving Money

"These planes," states Chief Pilot Dorrance, "have saved the company an unestimable amount of money in the rapid locating of fires, and in guiding ground fire-fighting parties to the affected areas. Since we have acquired our own aerial photography plane, this particular work can be done on short notice when needed, and we do not have to rely on a commercial photographer, who may be unable to give service when most needed."

The four twin-engine planes are used almost exclusively for executive transportation, but in several emergencies when parts had to be rushed to a mill or plant, the fleet has been available for flying the needed equipment.

With flight headquarters in St. Louis, the DC-3 and two of the Beech D-18S's are based at Lambert Field. One twin Beech and the single-engine equipment are kept in the company's own hangar in Bogalusa, where minor repairs and maintenance are handled. All major work on all six planes is done by Remmert-Warner, Inc., at Lambert Field. All major overhaul is done by Remmert-Warner on a time and hourly basis.

The planes average about 600 hours per year per plane, or 50 hours a month. September, 1952, was a record month for the corporate fleet, with more than 330 hours chalked up by the six planes.

The pilots—six in St. Louis and four in Bogalusa—average 600 hours a year flying time. The pilots' "flying hour" day is about eight hours for a 36 hour flight week, but scheduling is of necessity flexible and the final decision on flying time is up to the individual captain.

The aviation division of the company is part of a general transportation set-up, and the actual scheduling of the aircraft is handled by the traffic department. Again, this scheduling is not binding and the captain is responsible for any problems or changes that may arise at take-off time.

Each twin-engine plane is handled by a pilot-copilot team. The captains flying for Gaylord have had pre-World War II experience, although this is not a requisite. Several new pilots recently hired have only armed forces experience, but they must serve at least two years with the company before qualifying as captains. All pilots must have an ATR rating.

Personality

In the hiring of an executive pilot, personality qualifications must be taken into consideration. As Dorrance puts it, "There are many things necessary to being an executive pilot, other than just pure flying ability, as we feel that each man is in effect a public relations representative promoting the good will of the company."

As to future security for the pilot after his flying days are over, Dorrance states that although this problem has not yet arisen, the company has assured them that they will be well taken care of. The pilots receive the same employee benefits as do non-flying personnel and in addition are covered by the $50,000 admitted liability insurance applied to passengers.

The company has standardized navigational equipment in the planes as far as is practicable. The DC-3 has the following navigational equipment: an ARC 15C Omni and ILS; a Collins 51R Omni and ILS; two 89B surplus glide path receivers converted to 12 channels; two ADF's; a range receiver; a 522 Transceiver converted to 12 channels; a Collins 180 channel transmitter; a Sperry A12 autopilot with auto approach; and an ART 13 transmitter and Western Electric receiver as well as a 3105 Radio Marine.

If ever possible, Dorrance feels that he would standardize on Collins navigation and communications equipment. Future plans call for replacing single-engine planes with small twin-engines, except that the aerial photography plane would be retained. The company is very interested in a corporate design and is watching developments.

As is usual with corporate planes, Gaylord flies when the airlines fly, except in most instances limits are higher —usually 400 feet and three-quarters of a mile. In a year's time the Gaylord fleet flies into just about every major city in the U. S. and has found CAA to be generally very cooperative.

Dorrance feels that one of the biggest problems in relation to airports is keeping the armed forces from taking over the best airports. Another situation encountered at airfields, with the exception of a few fixed-base operators on the larger fields, is getting adequate service and parking facilities.

In discussing problems, Dorrance states that in the past the company has hit major equipment difficulties during conversion work. In several instances great difficulty was encountered in procuring replacement parts and this is still true, especially in the electronic field. It is quite possible, he feels, that a specially designed corporate aircraft would eliminate many of the reequipment problems. • • •

NEW Cessna Model 318.

Cessna Wins USAF Trainer Competition

An Air Force design competition for a new primary jet trainer has been concluded in favor of Cessna Aircraft Co., which won with the Model 318, above.

Cessna will get a Phase I contract calling for engineering work and construction of a mock-up. Later plans call for production of a limited number of the trainers for testing and evaluation.

The Model 318, which has not yet been accorded an Air Force designation, will be the first trainer designed as such to be developed for the military. The services currently use a modified combat plane, the Lockheed T-33, for jet training.

A twin-engine plane, the Cessna trainer will be powered by a pair of Marbore 352 engines of 900 pounds thrust each. The Marbore, designed by the French company Societé Turbomeca, is built in the U. S. by Continental Motors Corp. The engines will give Model 318 a top speed of over 350 knots.

All-metal, with a low wing and featuring side-by-side seating, the trainer spans 33 feet, is 27 feet one inch long, and nine feet 10 inches high. Gross weight is 5,600 pounds.

Model 318 won out over 14 other studies submitted by eight companies. Competitors were Beech Aircraft Corp., Fairchild Aircraft Division, Temco Aircraft Corp., Ryan Aeronautical Co., North American Aviation, East Coast Aeronautics and Goodyear Aircraft Corp.

Two-Year Renewal For Lake Central

Though in the throes of management difficulties for the past seven months, Lake Central Airlines' local certificate has been renewed for two years by CAB with an additional year beyond that a likely possibility. Further, CAB extended the line's routes eastward through Ohio to Pittsburgh.

The renewed certificate becomes effective February 28, 1953, and will be effective through December 31, 1954. The CAB has issued a show cause order to determine why extension through December 31, 1955, should not be granted.

TWA Decisions

In the same decision, the CAB extended Trans World Airlines' authority to serve Fort Wayne, Ind., as an intermediate between Chicago and Pittsburgh through December, 1954, with a show cause order for an additional year as in Lake Central's case. Further, TWA's authority to serve Marion, Mansfield, and Zanesville, O., was not renewed.

Decision to renew Lake Central came after the company submitted to a trustee-type management pending permanent transfer of ownership from the Weesner family interests. Such a permanent arrangement apparently hinges on other CAB proceedings. One of these involves a proposal under which North Central Airlines (former Wisconsin Central) would, in effect, purchase control of Lake Central.

Purdue Prominent

Prominent in this picture is Purdue University. Recently, Purdue officials entered into a financial arrangement with North Central and certain of them, including Dr. R. B. Stewart, were given high positions in the company. Dr. Stewart is also a director of Lake Central and slated for the presidency of the company during its remaining days as an individual entity. CAB has approved Stewart's joint occupancy of positions with two airlines.

In adjusting Lake Central's routes, the CAB

• **added** Springfield, Dayton, Columbus, Marion, Mansfield, Cleveland, Youngstown, Zanesville, and Dover-New Philadelphia, Ohio; Gary and Peru, Indiana; and Pittsburgh;

• **did not renew** authority for service to Connersville, Bedford or Bloomington, Ind., or Louisville, Ky.

The Navy's Chance Vought F7U-3 "CUTLASS," one of the world's most advanced carrier based fighters, equipped with H2 non-inflammable hydraulic fluid.

This plane's extra safety is no secret...

it's HOLLINGSHEAD H2®

non-inflammable hydraulic fluid,

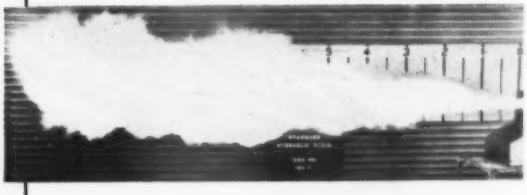
now available for commercial use!

"A hydraulic fluid that won't burn" was developed by HOLLINGSHEAD for the Navy to conform to Specification MIL-F-7083 (AER). Now this extra safety factor is available for *all* planes—H2 non-inflammable hydraulic fluid! . Here, for the first time, is a truly non-inflammable fluid, which also meets or exceeds the exacting airline standards set up to insure proper operation and life of the hydraulic system and its components. Ask HOLLINGSHEAD to give you the specific data you need!

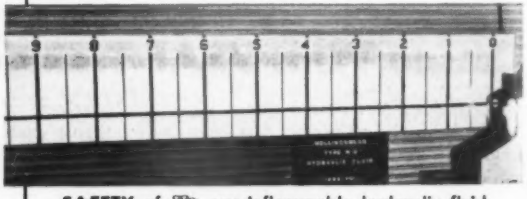
More Advantages—Not necessary to change "O" RINGS, SEALS, OR ACCUMULATOR DIAPHRAGMS. The fluid conforms to Specification MIL-F-7083 (AER). BETTER LUBRICITY and HIGHER SPECIFIC HEAT reduce parts wear. IMPROVED VISCOSITY in operating range from below –60°F. to 160°F. INHIBITED to protect against corrosion. LOWER COST than any similar fluid available.

WON'T BURN!

CAA tests show safety factor



ORDINARY PETROLEUM-BASE fluid bursts into flame in test which simulates danger of ruptured hydraulic line. Spray of fluid is forced under pressure of 3000 psi through 6300°F. flame.



SAFETY of H2 non-inflammable hydraulic fluid is proved when no fire results in same test. CAA Technical Development and Evaluation Center, Indianapolis, conducted the tests, and assigned H2 a flammability rating of zero.

Booklet contains details
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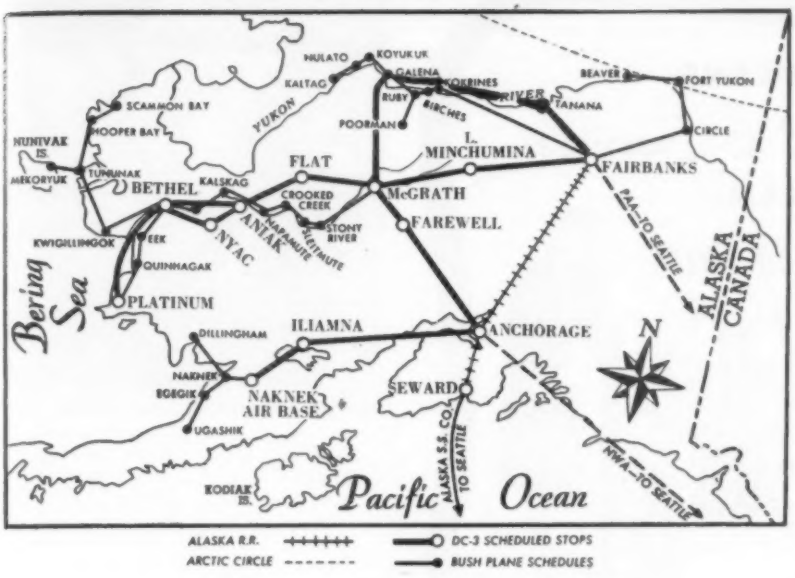
P. O. 9529—American Aviation—1 page—7 x 10 in.—B&W
Aviation Week

Northern Consolidated's Routes



Born of Six Mergers, NCA Serves Alaska

Five-year-old Northern Consolidated touches Territory's two largest cities, spreads out into the bush.

By Eric Bramley

ONE OF ALASKA's most extensive air transportation networks is that of Northern Consolidated Airlines, a five-year-old company that resulted from the largest airline merger in the Territory.

With headquarters in Anchorage, NCA spreads out over 2,500 miles of routes. It serves not only Alaska's two largest cities (Anchorage and Fairbanks) but also sends its bush planes into the small communities with such hard-to-pronounce names as Egegik and Ugashik.

NCA's main route operations include a line from Fairbanks through McGrath to Bethel, about 550 miles to the southwest, on the Kuskokwim River, near the Bering Sea; a route out of Anchorage to McGrath, where it ties in with the Fairbanks-Bethel operation; Anchorage-Naknek, in the Bristol Bay area; and Fairbanks to Galena and nearby bush communities.

Numerous bush routes, operated with several different types of equipment, fan out of places like Bethel and McGrath to Kuskokwim River points and towns along the coast, and out of Naknek to Bristol Bay communities.

NCA came into existence on December 1, 1947, as a result of the merger of six carriers. The only mail operator in the merger was Northern Airways, which formerly was Gillam Airways until its purchase by Frank Pollack. Its routes were in the Fairbanks-McGrath area and along the Kuskokwim.

Passenger-cargo lines merged were Jim Dodson Air Service, operating north and west from Fairbanks; Ray Peterson Flying Service, serving Platinum, Bethel, Kuskokwim River points, and Anchorage, and including Bert Ruoff's Bristol Bay Air Service, which Peterson had bought; Bob Miller's Northern Air Service; and Walatka Air Service, out of Bristol Bay.

Raymond I. Peterson, a veteran of Alaskan flying, emerged as president and general manager of the new company. It has been his job to put together a logical operating network out of the various segments of the merged companies. In five years, he has made considerable progress. He has ideas for making a lot more.

R. I. Peterson

Peterson, like many other Alaskan airline officials, started in the Territory as a one-man bush "airline." He went to Alaska in 1934, and by the next year was operating in the Bethel area with a Fairchild 71 and a Travelair. In those days landing areas were scarce, and Peterson eventually wrecked both his planes through such maneuvers as landing on rock-covered river bars.

For a year he gave up aviation and went prospecting. However, still believing there was money to be made in the wide-open Alaskan air transportation business, he borrowed $1,000 from a mining superintendent and bought a Ryan. His new "company," Ray Peterson Flying Service, got a persons-and-property certificate for operations from Platinum to Bethel, Kuskokwim River points, and on to Anchorage. He eventually bought out Bert Ruoff's Bristol Bay Air Service, which was flying from the Bristol Bay area into Anchorage. Following the merger, he became chief executive of NCA.

I rode NCA out of Anchorage, over the Alaska Range (where instrument operations took the DC-3 to 12,500 feet) to McGrath, and on down to Bethel, with Capt. George Stinton, First Officer Dick Carpenter, and Stewardess Lorraine Learned. As is the case in most areas of Alaska, there's no surface transportation between these points—either you fly or you don't go.

NCA's bush flying is coordinated with mainline schedules, and at McGrath we off-loaded passengers, cargo, and mail for the Kuskokwim River points. Shortly after the DC-3's arrival, the bush plane leaves. Thus it's possible to travel from Anchorage to a remote river point in a matter of a couple of hours.

Between McGrath and Bethel we landed at Aniak, a settlement consisting of a few houses along the runway, to unload cargo and mail. At Bethel, incoming cargo consisted of bread, eggs, fresh peaches, lettuce, and other food products. On the return journey the plane carried, in addition to passengers, the household furnishings of a Weather Bureau employe who was being transferred to another Alaskan point.

During the layover at Bethel, several other NCA planes landed and departed. It was the end of the commercial fishing season, and moving the fishermen from the canneries back to their homes takes all available equipment. Among those who came in a DC-3 load of fishermen was Oscar Underhill, NCA's oldest pilot in point of

BUSH PILOTS wear hip boots for jobs like this. A Northern Consolidated bush pilot is shown assisting a passenger aboard at McGrath for a flight down the Kuskokwim River.

service, who has been in Alaska almost as long as Peterson.

This shortage of equipment, which plagues all Alaskan airlines in the fishing season, was emphasized when I returned to McGrath. At this connection point, I was to transfer to another plane for Fairbanks, instead of returning to Anchorage. Usually the connection is a DC-3, but it was hauling fishermen on a charter. So I made the trip to Fairbanks in one of NCA's Norsemen on floats, together with four other people, their baggage, and the mail. The Norseman then returned to McGrath so it would be available for next morning's bush operations down the Kuskokwim.

This Alaskan problem of trying to have equipment in the right place at the right time for the peak business is a very real one. In the summer and early fall, there's more traffic than can be handled. In the winter, a lot of equipment can't be utilized.

At present, NCA is operating with three DC-3's, one PBY, six Norsemen (four on floats), four Stinson Reliants, and several twin-engine Cessnas. Sometime in the early part of this year, NCA will have a total of 16 Cessnas. Operation of several different types of aircraft presents operational and maintenance problems, and runs up costs, so Peterson has decided to standardize as much as possible on DC-3's and Cessnas.

NCA is getting its Cessnas through Westcoast Aircraft Sales & Service, of Seattle, and when all 16 are modified and are in service, the plan is to eliminate Stinsons and Norsemen from passenger-carrying operations. The Cessnas are flown (under a special Civil

OSCAR UNDERHILL, oldest NCA pilot in point of service, has been with the airline since its beginning.

Air Regulation exemption for Alaska only) at 6,555 pounds gross, instead of the standard 5,700 pounds.

The Cessnas will be licensed for wheels, skis, and floats, the first time this has been done. Modifications will be extensive, including installation of 300-hp Lycoming engines, changes in the control system, and the addition of two doors.

Peterson considers the Cessna as an interim airplane. Like other Alaskan operators, he's interested in getting a new type of aircraft, if a manufacturer will build one that is considered suitable for the unusual operations in the Territory. He states that this plane must be twin-engined, with minimum payload of 1,600 pounds, capable of carrying six to eight passengers. It must have a large freight door, and must be able to operate on wheels, skis, and floats. Single-engine performance must be good. He could use about 18 such planes.

Improvement of both flying and ground equipment has been one of Peterson's aims. NCA was the first airline to secure a loan ($705,000) under Section 302 of the Defense Production Act. Part of the money went for DC-3 modifications, $175,000 for modification of bush equipment, $215,000 for hangar, shops (NCA does all its own maintenance and overhaul except P&W 1830 engines, which are handled by Reeve Airmotive in Anchorage), an office building at the new Anchorage International Airport, and the balance for improvement of outlying stations.

Another of Peterson's aims is to build a tightly knit working force (NCA has 150 employes, including 28 pilots) and to cut the high rate of personnel turnover, experienced by most Alaskan airlines. Last July he installed a pension plan, for which the company picks up the bill ($50,000 a year). It covers all employes with over two years' service.

"When you get a good employe, the chances are his wife will object to Alaska," Peterson says. "We want that wife on our side. We don't want the employes to say that the company isn't doing anything for them. The pension plan gives them a definite incentive to remain with the company. It also gives us good reason to review carefully an employe's progress at the end of the first 23 months, before including him in the plan."

NCA is unique among Alaskan airlines in that it operates a number of fishing camps. It has a five-year concession for such camps in the Katmai National Monument, an area controlled by the National Park Service in the Bristol Bay region. Reason for establishing the camps was Peterson's belief that airlines can expect much from the tourist trade, especially from fishing enthusiasts, if there are facilities to handle the business.

Katmai, one of the world's best fishing areas, had been visited by comparatively few people, because of a complete lack of transportation and living facilities. Now, however, NCA float planes fly to and from the camps regularly. There are a registered guide and his wife at each camp. An all-expense three-day tour from Anchorage, including transportation, guide, meals, lodging, etc., costs about $175; a week's stay runs $275.

A number of U.S. airline officials (including T. E. Braniff, president of Braniff Airways) who have stayed at the camps say that the NCA tour folder isn't exaggerating when it describes "breath-taking angling" and a "fishing trip you will never forget." For the first two years (1950 and 1951) the camps averaged about 200 visitors a season. They did considerably better last year, and Peterson believes that they hold great hope for the future. Alaska lacks facilities; NCA has furnished them, and although they don't have all the comforts of home, they're more than adequate for the avid fisherman.

NCA resulted from one merger, and Peterson believes that more such deals may be logical in the future, particularly to the west of the Seward-Anchorage-Fairbanks rail belt. If several of the present airlines could get together, a merger would make possible the purchase of new, larger equipment and a more connected, comprehensive route system, he says.

"There's one danger," he warns. "Alaskan airlines always seem to function better under bitter competitive conditions. There's no surface transporta-

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Launching an air strike effectively calls for speed and split-second timing. Dependable starting of jets or piston-engine planes is at the heart of this problem. Highly maneuverable, compact ground power units now offer controlled current ample for starting and servicing even the largest aircraft.

The development by Jack & Heintz of aircraft-type generators and control systems for these applications has permitted the design of smaller, lighter and extremely mobile units of both self-propelled and trailer-mounted types.

Illustrated is a typical self contained power unit for use on Navy carriers. Its jeep chassis equipped with a special rear wheel mounting provides extreme maneuverability in driving among closely parked planes on a carrier deck.

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J&H UNITS MEET WIDE RANGE OF GROUND POWER NEEDS

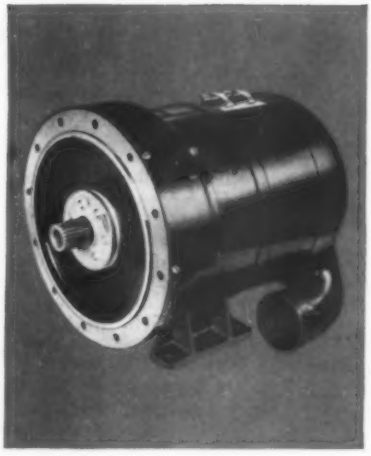
Fitting into the compact, rugged design of these mobile ground power units are a Jack & Heintz Generator and Electrical Control Panel, both offering unfailing performance in any weather and at temperatures ranging from -65° F. to +135° F.

The G32-1 Generator illustrated at right, has a 15 kw continuous rating, but is capable of 30 kw on an intermittent duty basis. The GC23-20 Control Panel, illustrated at right, offers: protection against reverse polarity and current; stable, long life voltage regulators; current regulation; and accurate paralleling.

Anticipating greatly expanded power requirements on these mobile power units, Jack & Heintz recently made available its Model G39 Generator. This 1000-ampere, 30v d-c, 4000/8000 rpm generator will supply 30 kw on a continuous basis—twice that of the largest previous production model, the G32-1 Generator described above. The G39, designed with a high overload capacity, is self-cooled by means of an integral fan, eliminating the necessity for auxiliary cooling equipment.

J&H also has available 400-ampere generators and controls.

Jack & Heintz generators and control panels are used on mobile power units being manufactured by O. E. Szekely & Associates, Beech Aircraft Corp., the Lycoming-Spencer Division of Avco Corp., and Continental Motors Corp.



J&H Model G32-1 Generator—500 ampere, 30v d-c, 4000/8000 rpm.

J&H Model GC23-20 Control Panel—closely regulates generator output.

J&H looks to the Future

Alternating current requirements for electronic servicing may be solved by developments under way on our new Model G181 Alternator. This is a 30-kva, 3-phase, 120/208 volt, 4800/7200 rpm machine designed to Specification MIL-G-6099*. It is controlled by our GR181, magnetic amplifier type, Voltage Regulator. This equipment also has air-borne applications.

Panelized system control equipment is available to meet the needs of each of these particular applications.

For additional information, send for our new Generator and Alternator Technical Bulletin #1200 and our Electrical Control Systems Bulletin #1150-1. Write Jack & Heintz, Inc., Department 101, Cleveland 1, Ohio.

** Military specification number as used herein is for the purpose of product identification only, and does not necessarily imply specification conformity.*

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tion, and a merged company would have a complete monopoly. Such a company would have to be on the ball all the time, making sure it was serving the public. Otherwise, it would do more harm than good." • • •

Oxygen Equipment Symposium a Success

Repair, maintenance, and servicing of airline oxygen equipment was the main topic of discussion at a recent symposium on aircraft oxygen sponsored jointly by the Scott Aviation Corporation and Air Associates, Inc., and held in Miami, Florida.

Attended by Delta, Braniff, PAA, National, Eastern Air Lines, and representatives of the CAA, the two-day session also discussed oxygen requirements for jetliners, safety procedures in the handling and servicing of oxygen equipment, CAA requirements for oxygen equipment in modern airliners, and the physiological needs of today's airliner passengers and crews.

Response to the symposium was so enthusiastic, according to Scott Aviation's president, E. M. Scott, that more are being planned for 1953.

News Briefs

Combat losses of military aircraft in Korea have **totalled 1,231** during the last two and one half years, with the USAF's figure of 667 coming close to that of the Navy and Marine Corps: 564. In exchange, **Communist losses have been at least 752,** with the USAF listing 115 "probables" in addition.

• •

Sixteen Super Constellations will be equipped with **Hamilton Standard props, model 43 E 60-9,** while a substantial number of Ham Standard reversible props have been ordered for the Air Force's C-121 and the Navy's R7V-1 complete with fluid anti-icing features.

• •

Replacement jet engine for planes currently using the J34 is understood to be the **Westinghouse J46,** a 7/10 scale model of the J40.

• •

Production of Convair 340's has been stepped up to meet a schedule of **eight planes a month** in 1953. Deliveries on the 44-passenger transports totaled 33 during 1952.

• •

A retractable-gear Heron, Mark 2, is being flight-tested by de Havilland, maker of the four-engine feeder transport. Switch from fixed gear adds about 20 mph to the plane's speed.

Extra Section

By William D. Perreault

ONE of the shortcomings of selling aviation safety is that it's very difficult to assess direct dollar values in many cases. The Strategic Air Command, boasting of 40% reduction in accidents in 1952 as compared to 1951, summed up the economic advantages in an interesting manner. The reduction in accidents from 30 to 18 per 100,000 hours flown, SAC said, represented a saving of 97 aircraft, 80 crew lives, and $23 million worth of equipment.

•

The December newsletter of the National Safety Council's Air Transport Section carried a sort of safety creed titled "I Believe" and written by Andrew J. Pyros of United Air Lines, LaGuardia Field, N. Y.:

I believe in the dignity of safety because it protects me and my fellow workers.

I believe in the teachings of safety because they attempt to alleviate suffering for me and mine.

I believe in the magnanimity of safety because it creates conditions whereby workers may enjoy the fruits of their labor.

I believe in the useful service safety offers because it considers humanity as unexpendable—not comparing humanity with inanimate objects.

I believe in the supreme worth of safety because it teaches the worker to perpetuate his right to life, liberty and the pursuit of happiness.

I believe that the rules and laws of safety are made for man and that safety is the servant for the welfare of man.

I believe in the sacredness of safety because it creates a world whereby cleanliness and order reign.

And above all, I believe in safety because it considers the prolonging and preserving of life and limb so that mankind shall not be broken and maimed while striving for a decent livelihood.

•

One of the industry's real veterans with a deep sense of the importance of safety in all phases of aviation died late last month. He was **Maj. R. W. ("Shorty") Schroeder,** 66, former vice president-safety of United Air Lines. "Shorty" died at Hines Veterans Hospital, Maywood, Ill., on December 29. After joining the Army Signal Corps in 1916, Schroeder became chief of the Air Corps' field engineering staff. Early in 1920 he set an altitude record of 38,100 feet. After leaving the Army in 1920 he served with Ford Motor Company, operating its air service. Later, in his role as chief of the airline inspection service of the Bureau of Air Commerce, "Shorty" pioneered some of today's air safety measures. During his long illness and until his death he was a prolific letter writer in the promotion of air safety.

•

From the helicopter front comes this data on commercial helicopter reliability during 1952. Helicopter Air Service, Inc., in its third year of operation providing air mail deliveries to 50 suburbs around Chicago, flew 20,200 hours during 1952, entirely accident free. During this time HAS, which operates six Bell helicopters, flew 355,000 miles and carried 3.4 million pounds of mail with a 97% performance factor. We think this is a very fine record for HAS and the helicopters concerned.

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For information on this and other Stratos equipment, write:

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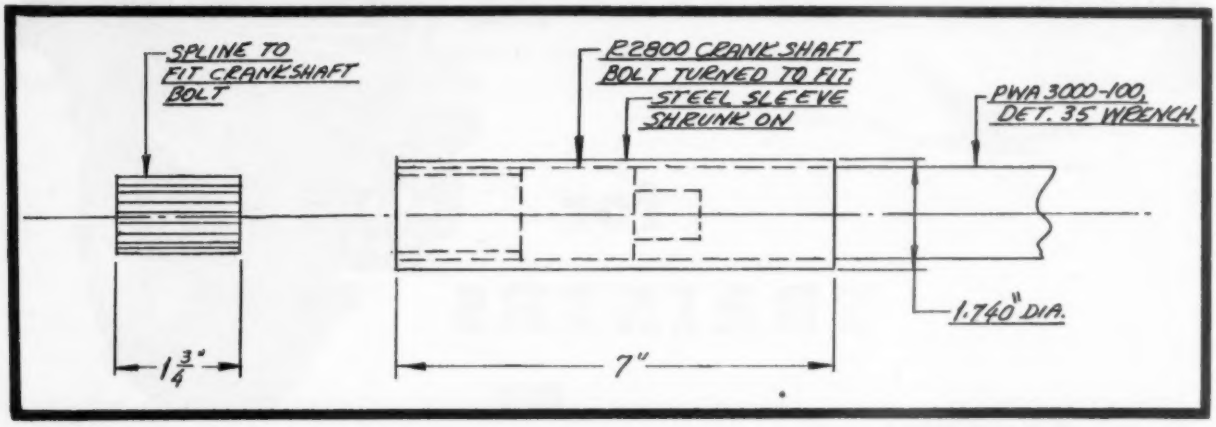


Shop-Made Tool Salvages Parts

Pan American World Airways' Miami engine overhaul shop has found the solution for excessive breakage of R-2800 engine crankshaft through-bolt removal tools, part number PWA 3000-100, detail 35. Faced with the breakage of as many as three of the $70 tools in disassembling some engines, S. W. ("Dick") Strama, PAA engine component overhaul superintendent, came up with the idea of salvaging portions of the broken tools and adapting them to a shop-made spline and sleeve that would reduce breakage costs.

The Strama idea called for the manufacture of a 1¼" long spline to fit the internal wrenching type through-bolt used in the crankshaft. A 1.740" diameter steel sleeve was shrunk on to a crankshaft bolt which had been turned to fit the sleeve, providing means for tool engagement with the spline. Minor modifications of the Pratt & Whitney tool (see sketch) provides the driving handle for the PAA adaptation.

PAA estimates the cost of the rework at $2.50 in materials and six-to-eight man-hours of labor.

How Not to Break Bolts: Watch Torque

The most frequent type of structural failure experienced on aircraft engines is that of bolt or stud breakage, and the man with the wrench is the most important factor in preventing this type of failure, according to the CAA.

Outlining the do's and don'ts of engine bolt installation and tightening in a recent Aviation Safety Release (No. 369) entitled "Let's Stop Those Studs From Breaking," CAA offers these specific recommendations:

• **Apply proper torque**—properly. Use a torque wrench, know the torque limits, and apply the torque uniformly. Examine the mating surfaces; they should be clean, smooth, and square. Use the specified thread lube and never sacrifice correct torque for cotter key hole alignment.

• **Be leery** of any clip or bracket under a highly stressed nut. It must mate squarely. The hole must be small enough to allow complete contact of the nut face.

• **Remove any aluminum alloy** bracket found under a highly stressed nut. Do it immediately.

• **Recheck the torque** on nuts holding brackets after a few hours of engine operation. Repeat the check if looseness is noted.

The vast majority of stud and bolt failures in engine operation result from fatigue, according to CAA, where the nut is too loose, not too tight. Although the designer, the metallurgist, the machine operator, the inspector, and others are involved, these have been double checked by the manufacturer's development, quality control, and test areas.

The final integrity of the engine is dependent on the mechanic who puts it together, and the mechanic is on his own. The cure, says the CAA, lies in proper wrench torque.

Daily Utilization

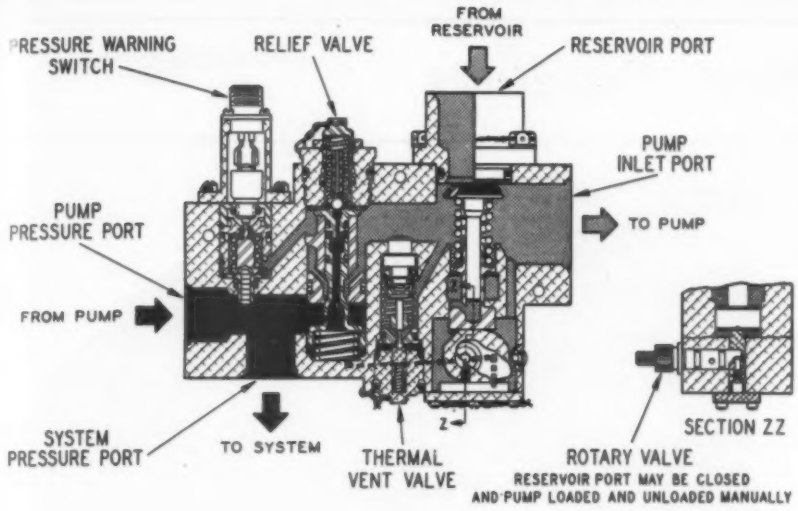
INTERNATIONAL CARRIERS

Average Revenue Hours of Use Per Day Per Aircraft for All Types of Service

	July	August
American	5:15	5:13
Braniff	8:26	7:55
C & S	9:26	9:11
Colonial	8:40	9:23
Eastern	9:14	9:37
National	10:09	10:04
Northwest	7:31	7:45
Panagra	4:19	4:19
Pan American		
Latin Amer.	5:44	5:34
Atlantic	5:57	5:44
Pacific	6:56	6:48
Alaska	9:05	8:59
TWA	7:21	7:28
United	5:49	5:57

	Sept.	Oct.
American	5:41	4:44
Braniff	8:33	8:36
C & S	9:27	9:35
Colonial	8:46	8:08
Eastern	9:10	9:08
National	9:48	8:42
Northwest	7:26	6:54
Panagra	4:24	4:19
Pan American		
Latin Amer.	5:09	4:31
Atlantic	5:55	5:39
Pacific	6:50	7:06
Alaska	9:03	7:35
TWA	7:26	7:18
United	5:32	5:44

NOTE: Above figures include utilization of air craft in both scheduled and non-scheduled service. Prior to July utilization figures covered only scheduled operations. Same is true of table on page 51.



New Pump Valve for Super Connies

Late model Lockheed Constellations will be equipped with a new Vickers hydraulic pump control valve which reduces the number of separate hydraulic units from 14 to four and is said to cut procurement costs by about 66%.

Called a five-in-one hydraulic system, the new valve is designed for use where it is desired automatically to unload pump delivery at a low pressure into the suction side, when oil temperature has reached a predetermined maximum.

Vickers, Inc. has designated the unit the model AA-40510 18GPM pump control valve and points out these features:

- **Provision for manual unloading.**
- **Built-in relief valve** to limit maximum system pressure.
- **Pressure actuated** electric switch to flag system pressure changes.
- **Use of pump shut-off** manual control also as a firewall shut-off device.

On the new Constellations, four model AA-40510 valves will permit unlimited operation of the hydraulic pumps in the shut-off position without damage. Individual pump performance can be checked with all engines running, without the possibility of damaging the other three when shut off. The suction hose will not collapse when a pump is shut off and if system malfunction brings about excessive fluid temperatures, the thermal feature in the new valve will automatically cut out the pump involved.

Baggage Cart Popular

The number of local service airlines showing interest in the new small station baggage cart produced by the Texas Metal & Manufacturing Company (AMERICAN AVIATION, August 4) is growing. Originally ordered by Pioneer Air Lines and later by Frontier, the Tex-Met cart has now been selected by Trans-Texas Airways and Southwest Airways, a total of fourteen carts having been ordered by the two companies.

The cart is of aluminum channel frame construction with steel flooring and bumpers. Luggage capacity is 1,200 pounds and dimensions are 76" long and 36" wide; the floor is 19" from the ground.

Daily Utilization

LOCAL SERVICE CARRIERS

Average Revenue Hours of Use Per Day Per Aircraft for All Types of Service

	July	August	Sept.	Oct.
All American	5:57	5:59	5:36	5:19
Braniff *	...	6:17	6:24	6:32
Bonanza	5:22	6:21	7:41	7:53
Central	6:00	6:00	6:00	6:00
Empire †	4:41	...	...	...
Frontier	7:29	7:29	7:27	7:19
Lake Central	4:15	4:21	4:18	4:33
MCA *	6:20	6:03	...	...
Mohawk	6:05	5:46	6:07	6:13
North Central ‡	7:28	7:14	7:33	6:55
Ozark	7:00	7:00	7:00	7:03
Piedmont	7:12	8:28	8:49	8:41
Pioneer	5:57	6:09	6:37	6:32
Southern	6:25	6:49	7:05	7:00
Southwest	5:52	6:18	6:14	6:16
Trans-Texas	4:56	5:26	6:41	5:39
West Coast †	5:15	4:55	4:58	5:50
Wiggins	2:33	2:06	2:13	2:22

** Braniff-Mid-Continent merger effective August 16, 1952.*
† West Coast-Empire merger effective August 4, 1952.
‡ Formerly Wisconsin Central Airlines. Change in name was effective December 16, 1952.

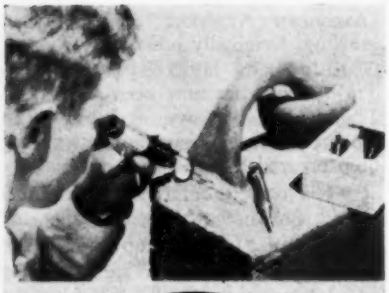
New Products

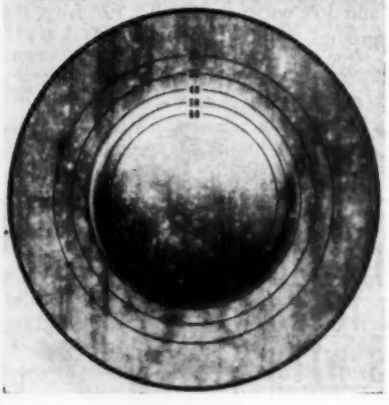
Hydraulic Elevator

A hydraulic elevator which can be mounted on any light truck or jeep chassis for raising baggage to aircraft, for aircraft maintenance, etc., has been introduced by the Hamlin-Klock Corporation.

Of 2,000-pound capacity and powered by a hydraulic pump driven by a power take-off, the new lift offers a 42" x 65" platform with fixed or collapsible guard rails. Safety devices incorporated in the design include provision for slow descent in event of rupture of hydraulic lines and a by-pass valve for lowering in case of power failure.

Address: **Hamlin-Klock Corp.**, Pasadena, Calif.





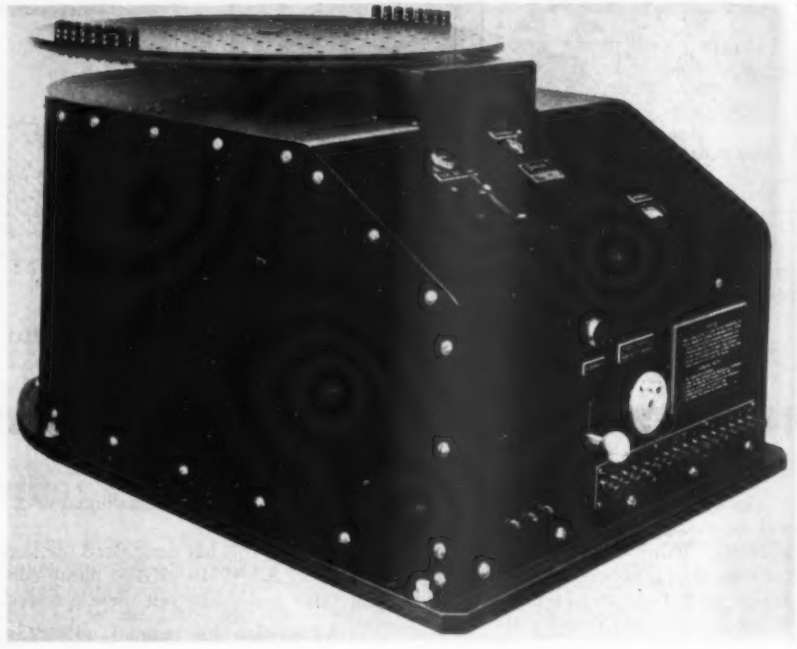
Hardness Tester

A portable hardness tester of the direct reading type for determining hardness of steel alloys and other metals in the 25-65 Rockwell "C" scale range has been developed by the Pacific Transducer Corporation.

The new tester includes a microball indentor, a measuring miscroscope, and a standard hardness test block.

In operation, the impact indentor drives a 1/16" tungsten carbide ball a short distance into the sample to be tested. The diameter of the indentation is then measured by the reticulated microscope, and since the diameter is a function of the hardness, the reticle indicates the hardness directly. Accuracy of the tester is said to be plus or minus 1½ points, "C" scale.

Address: **Pacific Transducer Corporation**, 11921 West Pico Blvd., Los Angeles 64, Calif.



Rate of Turn Table Calibrates Gyros

An instrument for calibrating rate gyros and associated equipment, called the Genisco Rate of Turn Table, has been announced by Genisco, Inc.

Incorporating a drive system without gearing or backlash, the Genisco unit features a steel-to-steel friction drive powered by a synchronous motor. Drive output is variable from 0.01°/sec. to 1200°/sec. by means of a single control, and speed indication is accomplished by an indicator drum carrying a scale 25" in length, which is coupled directly to the rate-controlling lead screw. Indicated turn rates are said to have been demonstrated accurate within 1% of the actual rate.

The rate of turn table is 18" high, 24" wide, 36" deep, and weighs approximately 275 lbs. The cast aluminum table is 24" in diameter.

Address: **Genisco, Inc.**, 2233 Federal Avenue, Los Angeles 64, Calif.

Regulator & Filter

A combination pressure regulator and filter assures a constantly clean supply of air for pneumatically operated instruments and similar equipment, according to the manufacturer, the Minneapolis-Honeywell Regulator Company. Accommodating line pressures up to 150 psi and maintaining any regulated output pressure from 0 to 35 psi, the new unit measures approximately 9" x 3⅛".

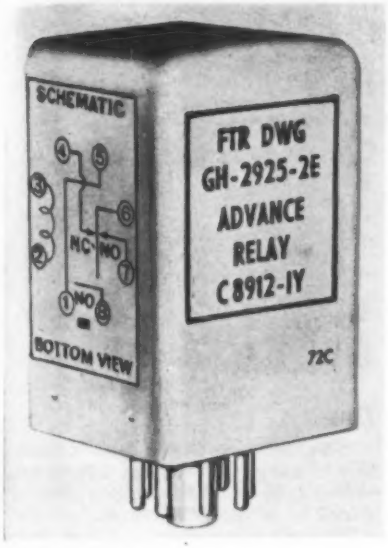
Filter element of the regulator unit is a self-contained cylinder made from phenolic resin-impregnated cellulose, offering general resistance to the effects of liquids and gases.

Address: **Industrial Division, Minneapolis-Honeywell Regulator Company**, Wayne & Windrim Aves., Philadelphia, Pa.

Solder Paste

A paint-on solder paste combined with flux called "Eutec-Tin Weld" has been placed on the market by the Eutectic Welding Alloys Corporation. Applied by brush, spatula, or dip methods, the new paste is a pre-mixed lead-tin solder said to have a capillary flow similar to silver solder, with strengths equivalent to conventional lead-tin solders.

Address: **Eutectic Welding Alloys Corp.**, Dept. P, 172nd Street & Northern Blvd., Flushing 58, New York, N. Y.



Light Relay

A lightweight relay for application in ground and airborne communications equipment has been announced by the Advance Electric and Relay Company. Of the hermetically sealed type and of compact design, the series 4000 relay, as it is called, is available in the s.p.s.t. and d.p.d.t. types, with silver or palladium contacts and with plug-in or solder terminal mounting. Dimensions are 1½" x 1½" x 2½".

Address: **Advance Electric and Relay Co.**, 2435 North Naomi St., Burbank, Calif.

Glass Fabric

A glass fabric, called "Form-Fab," for use in such end products as wing tips, radomes, heat ducts, etc., has been developed by Hess, Goldsmith & Company.

Available in thicknesses of 0.009", 0.012" and 0.018", the new fabric is said to stretch while the yarns remain stable, and will be used primarily as a base for reinforced plastics in the low pressure molding of industrial products with compound curves. Smaller thicknesses are available in rolls 250 yards long and the 0.018" thick material in rolls 125 yards long.

Address: **Hess, Goldsmith & Company Inc.**, 1400 Broadway, New York 18, N. Y.

Timer

An electronic repeat-cycle timer for heat treating, life testing, tube testing, heat cycling, etc., has been placed on the market by the G. C. Wilson & Co.

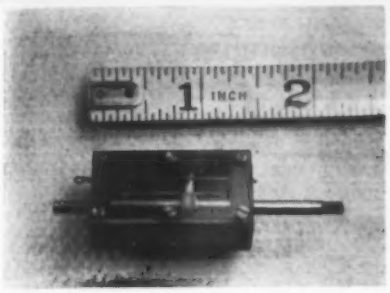
Using a single electron tube to charge a resistance-capacitance network, the timer provides "on" cycles adjustable from 0.2 to 200 seconds and "off" cycles ranging from 0.1 second to one minute. Unit is supplied in 6" x 6" x 6" steel cabinet with sloping front and is operated on 105-120 volt, 60-cycle a-c current.

Address: G. C. Wilson & Co., 2 North Passaic Ave., Chatham, N. J.

Blind Rivet

A blind rivet of 3/32" diameter, for tacking and fitting up purposes and for attaching name plates, radio sockets, etc., in restricted locations, is now being produced in response to an exceptional demand, according to the Huck Manufacturing Company. Accompanying the introduction of the new rivet, the manufacturer announces a new model 120 hand tool for driving 3/32" and 1/8" diameter rivets, using one hand only. Tool is available with replaceable nose assembly to accommodate varying rivet diameters.

Address: Huck Manufacturing Co., 2480 Bellevue Ave., Detroit 7, Mich.

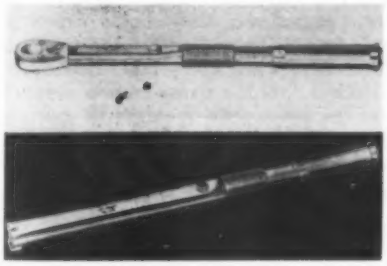


Potentiometer

A precision potentiometer for applications in the telemetering and electronics industries has been announced by Galetronics, Inc.

Of the sub-miniature type, the model LE shown is a rectilinear potentiometer which can be furnished up to 1,000,000 ohms with a resolution of 0.5%. Type RC, not shown, also introduced by the manufacturer, can be furnished up to 320,000 ohms with a resolution of 0.1%. Case for the type LE is 1⅜" long; for the type RC, ¾" diameter.

Address: **Galetronics, Inc.,** Pasadena, Calif.



Torque Wrench

A torque wrench which automatically releases when the desired torque value is reached has been announced by Richmont, Inc. Claimed by the manufacturer to be the first high quality ordinary wrench with precision torque built in, the "Hi-Lo Torq" wrench, as it is designated, is available in twelve models.

Six models are of the reversible ratchet head type with either ⅜" or ½" square drive; the remaining six are of the plain square drive. Depending on the model selected, torque range from 10 to 400 ft.-lbs. or from 100 to 4,800 in.-lbs. is available. Torque setting is made in micrometer fashion.

Address: **Richmont, Inc.,** 808 West Santa Anita, San Gabriel, Calif.

Hand Cleaner

A new hand cleaner for industrial uses, called Magnus Cob Hand Cleaner, provides a good lather, rinses readily, and results in material costs of less than 1/10¢ per wash, according to the manufacturer, the Magnus Chemical Company. The new cleaner is a free-flowing powder containing corn cob meal as the abrasive and is sold in bulk 90- and 185-pound drums.

Address: **Magnus Chemical Co., Inc.,** Department AA, Garwood, N. J.

Airline Commentary

By Eric Bramley

WHAT should be done with timetables during daylight saving time? Should arrivals and departures be listed in standard time or DST?

This interesting subject came up at the recent International Air Transport Association meeting in France. American Airlines' John Mahoney told the traffic men that it was time to stop confusing the passengers, and that timetables should list arrivals and departures at each city in terms of the local clock. In other words, if a city's on DST, use DST in the timetable; if it's on standard, use standard. Mahoney's research had shown that almost all U.S. airlines use standard (Europeans switched over to the local clock some time ago) but there's little uniformity about the way they do it—some use reference marks to indicate which cities are on DST, others don't, etc.

IATA airlines will be happy to use the local clock on schedules to and from the U.S., provided the U.S. airlines, through the Air Traffic Conference, will adopt it domestically. ATC has the proposal under study.

AA's arguments are persuasive. "During the summer, in U.S. cities that operate on DST, passengers eat, sleep, think and carry out all other functions in terms of local daylight time," it states. "It is logical that they should expect to catch their airplane in terms of the same clock . . . There is no reason to use a theoretical time measurement scale in a timetable, when every other activity in a city is carried on in relation to the local clock . . . If the transportation industry intends to put its own convenience ahead of the passenger's, it might as well use Greenwich Mean Time . . . The timetable is made to be used by the passenger, so let's look at the timetable from the point of view of the passenger."

AA's slogan is: "No translation is necessary. Your watch is your timetable."

If you're like us, and have cussed out the times you've had to do calculations from DST to standard time and vice versa, in order to decide when your plane is actually going to leave or arrive, you'll think the idea has merit. It's worth serious consideration.

•

Did you know that Braniff International Airways had 43 accidents in the last six months of 1952? However, the accidents weren't the type you read about in the papers. The company's 1952 safety record was perfect.

Despite this record, "on the ground, with 43 planes standing still, we committed mayhem," according to an excellent article in the Braniff *B-Liner*. "We butted, whacked into, crushed with hydraulic jacks, or rammed with loading ramps our fleet of planes all over the system. Proud DC-6's, DC-4's and energetic DC-3's limped to the repair line with splintered props, damaged antennae, split fuselages—and countless other major and minor damages."

The cost? Thousands of dollars in repairs, and thousands more in passenger refunds (plus loss of goodwill). Carelessness has always cost the airlines money, and Braniff isn't any worse than any other carrier. A little more care could produce a lot more profit.

•

A Delta Air Lines' flight, operated with an American Airlines' DC-6 on the interchange service, was buzzing along over Alexandria, La., and First Officer Ray Tiller was on the mike describing the beautiful countryside to the passengers. He concluded by inviting those with questions to ask them of the crew. The response was terrific—but not from the passengers. A Mid-Continent flight called Delta on the radio and said, "We have no questions, Delta." Another Delta flight came in with a remark, and the Alexandria radio advised that they had enjoyed the speech. Seems that AA's DC-6's have new PA mikes, and Tiller had picked up a radio mike by mistake!

Truman Redesignates Ryan and Gurney

Oswald Ryan's term as chairman of the Civil Aeronautics Board and Chan Gurney's as a Board member were continued into 1953 by action of President Truman on December 31, 1952. Ryan, whose term as a member runs through 1954 and is therefore unaffected, was re-designated chairman for the entire year of 1953 by Truman.

But Ryan told AMERICAN AVIATION he will offer his resignation of the chairmanship to incoming President Eisenhower on January 20 "so that he may be entirely free to select a chairman of his own choosing." No vice-chairman will be named until Eisenhower takes office.

Gurney's re-appointment as a member is subject to Senate approval. He is a Republican and is generally expected to be granted a full six-year term when the legislature acts. No action had been taken at press-time to fill the vacant fifth spot on the Board created by the resignation of Donald W. Nyrop on October 31, 1952.

Ryan Favors Mergers Over Route Expansion

A generally healthy picture for the airline industry was foreseen recently by CAB Chairman Oswald Ryan if "unwise policies of overly optimistic expansion" can be avoided. In an address delivered in Dallas, Ryan favored "very close scrutiny of future route expansion," and advocated maximum expansion of coach service on a sound economic basis.

Further, the Board chairman said CAB "anticipates further improvements in the air pattern" through appropriate interchange agreements and mergers. Ryan said the Board's policy of encouraging interchanges and mergers as a substitute for new routes does not mean that no further routes will ever be granted.

"It does mean, however, that future route expansion must be subjected to a very careful scrutiny if we are to assure sound economic conditions in this industry and that sometimes equipment interchanges or merger may be found to be more appropriate remedies for the accomplishment of improvements in the route pattern."

Ryan concluded that "what we are all seeking is a strong and healthy national system of air transportation; a system which will be strong enough to weather the storms of economic depressions as well as ride the waves in prosperous times; an air transport industry which will be able to depend upon its own self-reliant strength and not be dependent upon the Federal treasury for support; and, finally, an air transportation system which, by reason of its sound economic policies, will be able to provide progressively lower fares and, thereby bring the benefits of this new transportation within the reach of all the people of our country."

Bryan Recommends Local Route Extensions

CAB Examiner Herbert K. Bryan has recommended local service route extensions for Pioneer Air Lines and Trans-Texas Airways in his report in the Texas Local Service Case. Subject to final CAB action, the proposal is to:

- **extend** Pioneer from Houston to Beaumont-Port Arthur-Orange and from Austin to Tyler via Temple and Waco.
- **extend** Trans-Texas from San Antonio to Austin.
- **authorize** either Pioneer or Trans-Texas to operate between Shreveport and Tyler via Longview.
- **substitute** Breckenridge for Mineral Wells and re-designate Bryan as College Station on Pioneer's present routes.

CAB CALENDAR

Feb. 2—Hearing in National Airlines Final Mail Rate Case. Washington. (Docket 3037 et al.)

Feb. 2—Hearing in C-46 Increased Charter Rates Investigation. (Docket 5789).

Feb. 16—Hearing in Cleveland-New York Nonstop Case. Washington. (Docket 1789 et al.)

Feb. 23—Hearing in Trans-Atlantic Cargo Case. Washington. (Docket 3041 et al.)

May 1—Hearing in General Passenger Fare Investigation. Washington. (Docket 5509).

RECENT CAB DECISIONS

- **The Department of Defense** granted leave to intervene in Trans-Atlantic Cargo Case which involves overseas all-cargo certificate applications of Seaboard & Western, Transocean, et al.
- **Seaboard & Western** and Trans-Caribbean Airways granted exemption from provisions of Act which otherwise would require hearings on agreement under which S&W is selling two DC-4's to Trans-Caribbean for total of $1.3 million and leasing back the two aircraft plus a third for $15,500 per aircraft per month.

AS OF NOW

Hearings in CAB's **LARGE IRREGULAR AIR CARRIER INVESTIGATION** appear destined for an even longer run than originally anticipated. Set up for individual sessions in Washington, Miami, Los Angeles, and Seattle, the hearings are still on the Washington-Miami track and will be for several months.

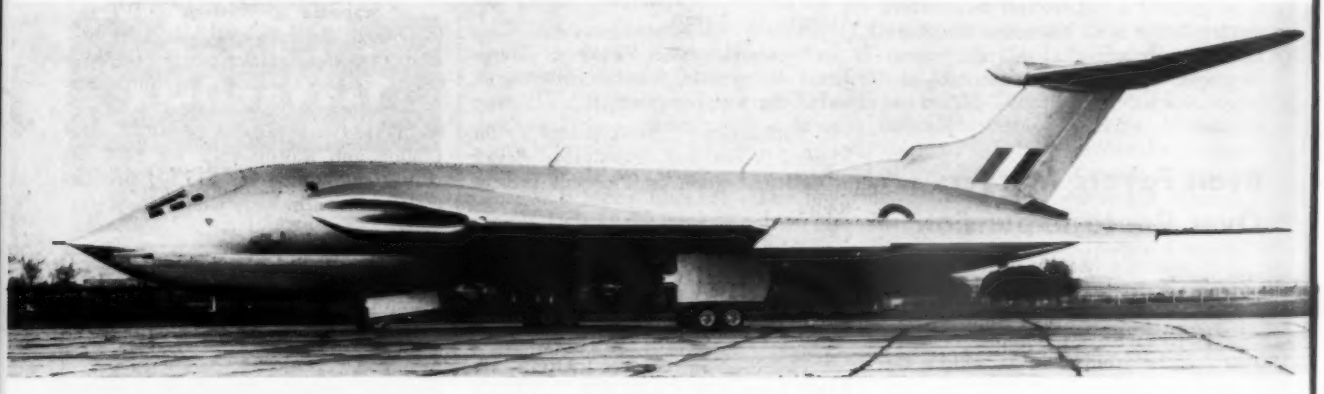
On January 12, the second Washington session opened with approximately 25 non-scheduled airlines slated to present their cases. Being weighed at this writing is the possibility of a second show in Miami to hear carriers not reached when the Christmas recess set in. To date, four months have been consumed by the hearings with the halfway mark far from reached.

The **COLONIAL AIRLINES MERGER CASE** also moved back to Washington last week after a two-week session in New York at which numerous subpoenaed witnesses testified on various stock phases of the proposed Colonial-Eastern merger. Earlier in Washington, hearings concerned direct "economic" cases presented by Colonial and Eastern. On the return to Washington now, National Airlines, also a potential merging partner for Colonial, will present its direct case.

The **TRANS-ATLANTIC CARGO CASE,** involving applications for trans-Atlantic all-cargo certificates, is now set for hearings February 23 in Washington. Reopened at the direction of President Truman, procedural steps in the case have been delayed somewhat pending CAB disposition of numerous motions of airline parties. Applicants for the routes are Seaboard & Western, Transocean, Flying Tiger, Overseas National, and European-American.

CAB's decision against renewal of **E. W. WIGGINS AIRWAYS** local service certificate will not become effective at least until a fifth Board member has been appointed. The possibility of reversal of the decision was heightened recently when CAB ordered further arguments on Wiggins' reversal plea. The arguments are not to be held, until a "full Board" may participate and CAB defines a "full Board" in this case to mean five members. Original decision against Wiggins was to have taken effect January 1. CAB has had only four members since October 31, 1952.

LARGE ELONGATED AIR INTAKES for the four Armstrong Siddeley Sapphires are clearly shown in this photo of the Handley Page HP 80. Side view points up the pronounced sweep-back of both the fin and tailplane. Also clearly seen are the two main landing gears, each with four double-tired wheels.



First Flight for Crescent-Wing Bomber

. The world's first crescent-wing combat aircraft, the Handley Page HP 80 Victor four-jet bomber, has made its first flight. No other bomber, the manufacturer claims, flies as fast and as high with as great a bomb load.

Handley Page pioneered the crescent-wing configuration and plans to use it for the HP 97, a jetliner due to fly in 1954 which will have the same powerplant as the Victor—four Armstrong Siddeley Sapphires (AMERICAN AVIATION, October 27, 1952). Latest power rating of this engine is a matter for conjecture—it is probably considerably above the 8,300 pounds static thrust officially mentioned last April.

The Victor has been ordered in quantity for the Royal Air Force and completes the present series of jet bombers with which the British air arm is to be equipped: it is in the same category as the Vickers Valiant and Avro 698 Vulcan delta, meeting Air Ministry specifications calling for "operation at high subsonic speed at very great heights over long ranges, besides giving the pilot good control over the whole speed range, particularly at approach and landing speeds."

The crescent wing combines the aerodynamic and operational merits of delta, swept, and razor-thin wings, being designed for flight at sonic speeds without any of their disadvantages. Near the fuselage the crescent wing has similar characteristics to the delta; it is swept back 60° and is broad and deep enough to house engines, fuel, undercarriage, etc.

Farther out along the span, the wing has the less radical sweep of a normal swept-back wing and is not so deep in relation to its width. Finally, nearer still to the tip, the wing becomes thin and almost straight with less than 15° of sweep.

Handley Page's chief designer, R. S. Stafford, has explained how use of the crescent wing can improve non-aerodynamic features of a bomber's design. Its large center-wing sweep enables a fuselage bomb-bay to be unobstructed, as the main load-bearing wing structure is well forward. Behind this, landing gear wheels can be folded away and engines can be buried. They are accessible without weight penalty as no cut-outs are needed in primary members.

With the main structure ahead of the fire zone, the chance is remote of an engine fire being fatal. Production of a big crescent-winged plane is facilitated because its wing subdivides into components with inherent ease and cheapness of construction. Moreover, this eliminates normal troubles when moving heavy bombers by road.

The Victor is designed to operate from runways of normal strength—two main landing gears, each with four double-tired wheels, spread the bomber's load over a large area. The plane features leading-edge flaps in order to improve lateral control at the stalling point. The high swept-back tailplane is mounted on top of a single fin (also with pronounced sweep-back). • • •

Priorities Given to British Transports

A big speed-up in the production of Britain's three turbine transports—the Bristol Britannia, de Havilland Comet, and Vickers Viscount—will result from a British government decision to accord "super priority" to these commercial planes. The "super-priority" scheme, introduced last March and hitherto confined to military aircraft, gives first call on Britain's scarce raw materials, skilled manpower, and other resources.

"Super priority is now being extended in the field of civil aviation," the British government states, "to back up the export drive . . . to help the British aircraft industry to take fullest advantage of its technical lead . . . in developing passenger aircraft. Our ability to sell them abroad depends upon the manufacturers being able to offer deliveries early enough, and in sufficient numbers, to attract foreign operators to change over to British types. If this unique opportunity, with all its potentialities for the future, is not to be thrown away, we must be quick off the mark. That is where super priority can help."

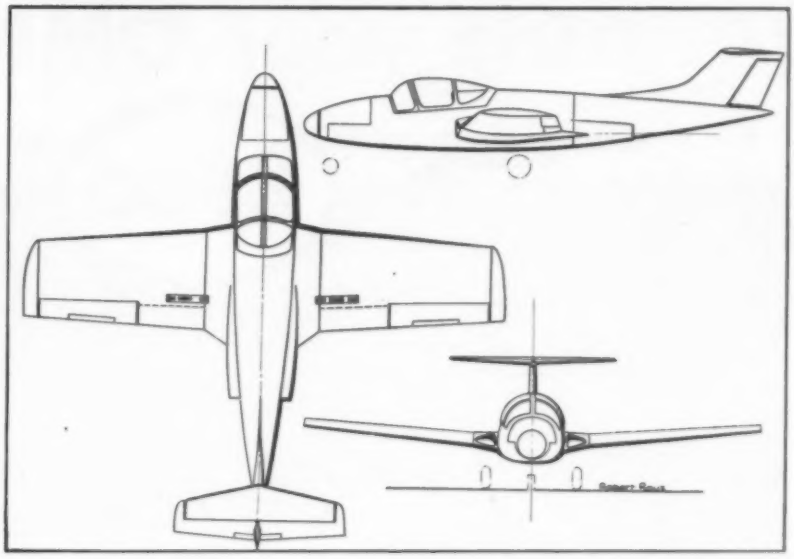
Simultaneously with the three transport aircraft, two jet bombers have been put on the "super-priority" list—the Handley Page HP 80 Victor and the Avro 698 Vulcan. The other planes already accorded "super priority" are: the Hawker Hunter and Vickers-Supermarine Swift day fighters; the Gloster Javelin all-weather fighter; the English Electric Canberra and Vickers Valiant jet bombers; and the Fairey Gannet anti-submarine aircraft.

NEWS BRIEFS

Switzerland's **N-2010 delta fighter prototype** built by the Federal Aircraft Factory is expected to fly early in 1953. Lack of funds may retard the completion of a second prototype, the N-2020, which would be powered by two Armstrong Siddeley Sapphires instead of the four less powerful jets used in the first plane. **Flight tests** are continuing with two 5/6-scale models of the original N-20 design.

• •

Avro Canada's **CF-100 Mark 4 twin-jet fighter** is scheduled to go into production when the current Mark 3 run ends at about mid-1953. The **prototype Mark 4,** powered by two Avro Orenda turbojets, flew at supersonic speed at 40,000 feet last month and is currently engaged in a sonic test program.



Scheduled to fly this month is the Morane Saulnier MS 755 jet-powered primary trainer, an all-metal, side-by-side seat model which bears more than a superficial similiarity to the Cessna Model 318 (see page 41 of this issue), which recently won the USAF trainer competition. Both planes have the same powerplant—two Turbomeca Marbore turbojets.

Traffic Growth Slower in 1952: ICAO

Figures published by the International Civil Aviation Organization show that, despite significant increases, the rate of growth of commercial air traffic slowed up considerably in 1952 as compared with the two previous years; the number of passengers carried increased by only 13% between 1951 and 1952, against a 28% increase between 1950 and 1951. The same change is shown in passenger-miles (15% against 26%) and cargo ton-miles (4% against 16%).

Year	Miles Flown	Passengers Carried	Passenger-Miles (millions)	Cargo Ton-Miles	Mail Ton-Miles	Average number of passengers per aircraft (number)	Average distance flown per passenger (miles)
1952	1,044	45.0	24,544	623	178	23.5	547
1951	988	39.9	21,375	602	160	21.6	536
1950	890	31.2	16,963	518	143	19.1	544
1949	836	26.5	14,478	390	128	17.3	546
1948	789	23.5	12,987	286	114	16.5	552
1947	708	21.0	11,744	187	88	16.6	559
1937	165	2.5	876	n. a.	n. a.	5.3	350
			Increase or Decrease Between Years				
1951-52	+6%	+13%	+15%	+4%	+11%	+9%	+2%
1950-51	+11%	+28%	+26%	+16%	+12%	+13%	—1%
1949-50	+6%	+18%	+17%	+33%	+12%	+10%	—1%
1948-49	+6%	+13%	+11%	+36%	+13%	+5%	—1%
1947-48	+11%	+12%	+11%	+53%	+30%	—1%	—1%
1947-52	+47%	+114%	+109%	+233%	+103%	+42%	—2%
1937-47	+329%	+740%	+1240%	n. a.	n. a.	+213%	+60%
1937-52	+532%	+1700%	+2701%	n. a.	n. a.	+343%	+56%

n. a. means not available.

Exclusions: China and USSR.

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TO GET THE ESSO CO-PILOT — a complete directory of Esso Dealer Airports, write Esso Aviation Products, Room 428, 15 West 51st St., New York 19, N. Y.

People

ADMINISTRATIVE

Philippine Air Lines has named the following executives as vice presidents: **Ch. M. Biondi,** to vice president-general traffic and sales manager, with additional functions of European regional director; **Col. Walter L. Hurd, Jr.,** to vice president-general operations manager; **Rafael Ygoa,** to vice president-treasurer; **Daniel Me. Gomez,** to vice president-secretary.

The Piper Aircraft Corp. recently made the following executive appointments:

William T. Piper, Jr., executice vice president; **Thomas F. Piper,** vice president in charge of operations; **Howard Piper,** vice president in charge of research and development; and **Charles Pool,** treasurer.

Captain J. C. Kelly-Rogers has been appointed deputy general manager for Aer Lingus, the Irish airline. At the same time, **Max Stuart-Shaw** was named the line's assistant general manager, and **P. J. Brennan** and **O. Hone** were appointed commercial manager and traffic manager, respectively.

J. P. W. Vest is the new Washington representative of Sikorsky Aircraft Division, United Aircraft Corp.

Lee Rogers is the new manager of the public information department of Lockheed Aircraft Corp.'s Georgia Division. Rogers joined Lockheed, at the Marietta plant, in the fall of 1951 as public information officer.

Rogers

Camden

Captain Sterling W. Camden, formerly one of Eastern Air Lines' senior pilots, is the new executive vice president of the Air Line Pilots Association. Captain Camden will make his new headquarters in Chicago.

Joseph P. Burge has joined the Electronics Division of the Curtiss-Wright Corp. as industrial relations manager. Burge comes to Curtiss-Wright from the Hoboken Division of the Todd Shipyard Corp.

H. M. Kingsley has been appointed secretary for the International Air Transport Association's branch office in Singapore.

Edmund B. Parke recently joined Air Associates, Inc., as factory manager of the company's Aircraft Products Division, Teterboro, N. J. Parke was formerly manager of manufacturing engineering at Wright Aeronautical Division of Curtiss-Wright Corp.

Gordon F. Maxwell has been named division manager of the Pacific-Alaska Division for Pan American World Airways. Maxwell, who has been with Pan Am 16 years, will make his headquarters in San Francisco.

Harry E. LeRoy, former works manager for the Electronic Division, Curtiss-Wright Corp., has been appointed director of manufacturing for Aviation Engineering Corp.

Arthur P. Brown has been named comptroller of the Solar Aircraft Company's San Diego plant. Brown was formerly with the E. W. Bliss, Co.

William Patton has been named to the post of controller for Pastushin Aviation Corporation.

Patton

de Brigard

TRAFFIC & SALES

Jorge de Brigard has been promoted from representative in Paris for AVIANCA, Colombian National Airways, to general representative for Europe. Brigard will continue to have his headquarters in Paris.

George W. Moore has been promoted from assistant sales manager to sales manager of the Electronics Division, Curtiss-Wright Corporation.

George Scott has been named assistant to the general traffic and sales manager for Braniff Airways. In his new post Scott will help correlate system-wide sales and traffic activities.

Alan B. Bland has been named regional traffic and sales manager for Guest Airways with headquarters in Miami. For the past three years, Bland has been director of international and domestic travel for the American Automobile Association.

Graydon Hall, formerly traffic and sales manager for Eastern Air Lines in Chattanooga, has been promoted to traffic and sales manager for the line in Indianapolis. Hall replaces **George Jordan,** resigned. **Odell Sessoms,** formerly with Eastern at Charlotte, has been moved up to the traffic and sales manager post in Chattanooga.

E. A. Carter has been named sales engineer in the Los Angeles office of the Wright Aeronautical Division, Curtiss-Wright Corp.

OPERATIONS—ENGINEERING

Glenn E. Seidel has been elected a vice president of Minneapolis-Honeywell Regulator Co. in charge of engineering in the company's Minneapolis plants.

Hayward W. Henderson, former aero research projects supervisor, has been promoted to manager of aeronautical engineering planning for Minneapolis-Honeywell Regulator Co. Henderson succeeds **John V. Sigford,** recently transferred to Dallas to head a special engineering project being carried out by Honeywell and Chance-Vought Aircraft.

Albert E. Namey was recently promoted to the post of chief engineer of the test equipment design department at the Towson plant of Bendix Radio, Division of Bendix Aviation Corp. Namey succeeds **Norman Caplan,** who has been made chief engineer of the military communications and navigation dept.

Ferd Gillig has been named to head the newly created aeronautical section of the Ethyl Corporation. Gilling, who joined Ethyl in 1932, was, until his recent appointment, manager of aviation research operations.

W. H. Corom, formerly manager of operations at Elmira for American Airlines, has taken over the similar post for American at New York International Airport. **E. A. Lindig,** formerly in Buffalo, succeeds Corom at Elmira.

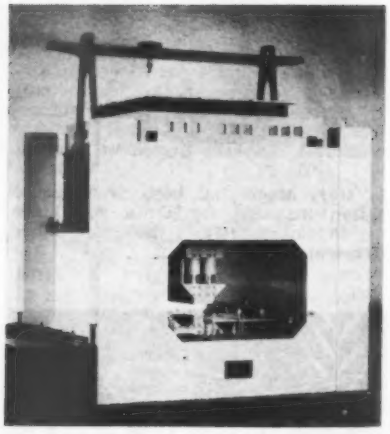
Gary Moore has been promoted to station manager for Delta Air Lines at Columbus, Ga., succeeding **Lee Wenstrup.**

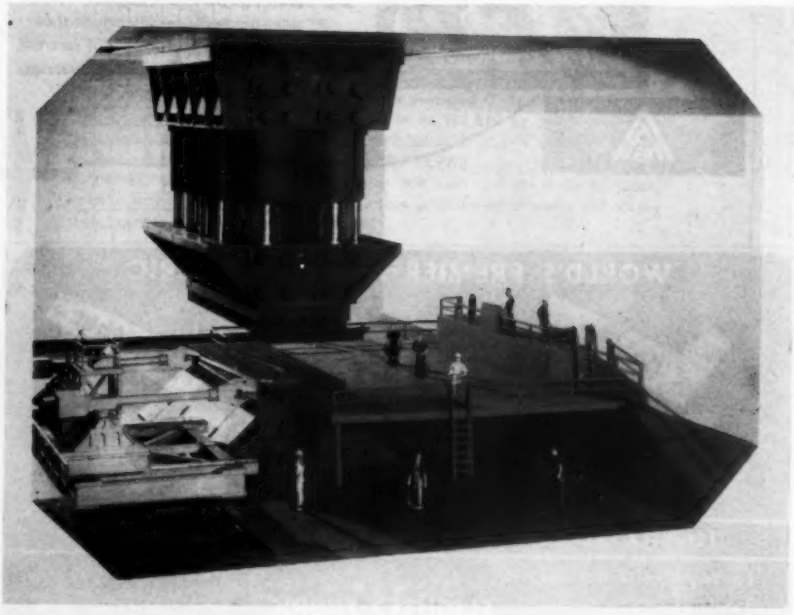
The following employes have recently completed 20 years or more of service in the aviation industry.

- **E. W. Chatfield,** American Airlines. Captain, Los Angeles. 20 years.
- **G. Antolchik,** American Airlines. Inspector, line maintenance, New York. 20 years.
- **W. R. Swain,** American Airlines. Captain, Forth Worth. 20 years.
- **Frank Staley,** Braniff Airways. Captain, Dallas. 20 years.
- **Eugene F. Whelan,** Pan American World Airways. Assistant foreman, metal shop Miami. 20 years.
- **Joseph M. Shaw,** Pan American World Airways. Master mechanic, Miami. 20 years.
- **Fred Adderly,** Pan American World Airways. Line crewman, Nassau. 20 years.

With more than 3,000 F-84 Thunderjets delivered, Republic Aviation is now going into volume production of the swept-wing F-84F Thunderstreak. Here production workers put the finishing touches on a Thunderstreak tail assembly.

The Production Picture





Heavy forging presses with capacities of 75,000 pounds or more are possible through the new design concept shown above and at left. Throatless Press Co., a new Cleveland firm jointly owned by Austin Co. and Hydraulic Press Manufacturing Co., think a massive monolithic structure like this model will support, suspend, and house all required elements of a heavy press, at the same time providing the counter force needed to resist upward pressures encountered in forging entire wing sections and other plane parts. Elimination of giant columns connecting the head and base of ordinary presses makes possible 360° access for placing and removing dies.

Production Spotlight

Rand Report Questions Big Bomber Need

A re-evaluation of the USAF's need for an intercontinental bomber may be in the works. The Rand Corp., of Los Angeles, a Defense Department advisory organization set up some years ago whose exact functions have always been somewhat nebulous, has completed a study of long-range bombing, it has been learned.

Generally the Rand Corp. report questions whether such aircraft as the Consolidated Vultee YB-60 (swept-wing, all-jet version of the B-36) and the Boeing B-52 would be needed to handle bombing of Russia in case of war. The report is said to point out that the Boeing B-47 medium bomber might well be able to handle the job.

Washington observers believe it unlikely that the Rand report will result in any decision to make substantial cutbacks in the B-52 Stratofortress program at Seattle. Among other things, Boeing is pretty well advanced on tooling for production of the eight-jet bomber. But there is a definite possibility that some money originally earmarked for output of B-52's will end up being used for B-47 Stratojets instead.

New Equipment for Defense Pact Nations

A new model of the World War II Navy Corsair, Chance Vought's F4U-7, is now being delivered to the French Navy. The aircraft carries heavier armor and armament than earlier Corsairs and is powered by a Pratt & Whitney R-2800-18W reciprocating engine.

Simultaneously, Temco Aircraft Corp. announced it had received a USAF order for a "limited number" of its T-35 Buckaroo trainers. The planes will be shipped abroad for use by MDAP nations (see page 19).

The MDAP version of the Buckaroo will differ from the Air Force's YT-35 by being equipped to carry two .30-caliber machine guns, a gun camera, gunsight, and 10 2.25-inch rockets. Temco is also negotiating with several Latin American and Far East nations for sale of additional T-35's, which are actually military versions of the Temco Swift personal plane.

New jet engine altitude facility at NACA's Lewis Flight Propulsion Laboratory in Cleveland. First used in 1952, it is the only equipment in the United States large enough to test, through their full range of power and altitude, the largest jet engines now being developed.

New Cessna Civilian and Military Models

Cessna Aircraft Co. is now testing a new high-performance, twin-engine executive transport, the Model 310, before putting it into production. The 310 will be an all-metal plane with tricycle landing gear.

The company's annual report also disclosed that Cessna, which acquired the stock of Seibel Helicopter Co. last April, is also developing a new two-three place helicopter for potential military and commercial use, as well as a larger rotary-wing craft, the CH-1.

In addition Cessna is working on a new higher-performance observation-reconnaissance craft for possible military use. This craft would take care of jobs which Cessna's current L-19 is unable to handle.

The company has just broken into the jet field by winning the USAF jet trainer competition (see page 41).

NEWS BRIEFS

Goodyear Aircraft Corp. will use its plants at Akron, Ohio, and Litchfield Park, Ariz., to turn out components for the twin-engine **Beech T-36A** trainer. The company will build the complete canopy assembly plus the cabin section of the fuselage and the tail cone.

• •

General Motors Corp.'s Oldsmobile plant at Lansing, Mich., has started delivering **J65 components** to GM's Buick Motor Division. Oldsmobile has been ordered to produce turbine and compressor units for the Curtiss-Wright Sapphire.

• •

The **Georgia Division of Lockheed Aircraft Corp.** has completed the second of two USAF contracts for modification of Boeing B-29's ahead of schedule and the Marietta facility is now cleared for **production of the Boeing-licensed B-47** and later **Lockheed's own C-130** turboprop cargo plane. First Lockheed-assembled Stratojet flew a few weeks ago.

Four-Rotor 'Copter

Convertawings, Inc., Amityville, Long Island, N. Y., is now building a four-rotor helicopter, called a quadrotor, and the craft's first flight is expected to take place in the fall of 1953. It is designed to carry passengers or freight and reportedly will have high speed and heavy load-lifting capacities.

Domestic Airline Traffic for October, 1952

Airlines	Revenue Passengers	Revenue Passenger Miles	Available Seat Miles	Passenger Load Factor %	Mail Ton-Miles *	Express Ton-Miles	Freight Ton-Miles	Total Ton-Miles Rev. Traffic	Available Ton-Miles Flown	% Available Ton-Miles Used	Revenue Plane-Miles	Scheduled Miles	% Scheduled Miles Completed
American	502,990	267,948,000	357,971,000	74.85	1,411,829	1,029,735	4,447,201	32,429,557	47,545,929	68.21	7,889,029	7,847,567	99.10
Braniff	124,789	41,207,000	64,236,000	64.25	166,376	126,924	233,761	4,461,235	7,815,841	57.08	1,951,232	1,902,418	99.48
Capital	198,965	63,469,000	98,651,000	64.34	175,067	269,632	416,708	6,936,513	13,392,314	51.79	2,305,716	2,202,325	98.95
Caribair	7,517	627,000	1,362,000	46.32	1,380	. . .	2,930	56,243	140,741	39.96	52,458	45,482	100.00
C & S	53,264	19,909,000	29,267,000	68.03	75,441	105,113	110,960	2,198,929	3,581,220	61.40	857,862	847,104	99.75
Colonial	28,798	7,371,000	12,677,000	58.14	11,597	12,595	17,189	725,590	1,367,998	53.04	360,620	328,374	98.55
Continental	31,396	12,029,000	19,812,000	60.71	39,374	17,678	76,499	1,286,218	2,317,388	55.50	649,451	644,490	99.89
Delta	85,525	35,208,000	55,610,000	63.31	154,298	115,471	395,748	4,041,825	6,695,644	60.36	1,498,828	1,467,213	99.46
Eastern	357,754	159,806,000	278,230,000	55.59	477,451	430,098	687,612	17,773,805	37,261,933	47.70	5,280,234	5,587,082	98.62
Hawaiian	27,749	3,548,000	6,736,000	52.67	2,779	. . .	117,781	414,420	850,982	48.70	326,504	252,802	99.21
National	51,111	30,830,000	51,841,000	59.47	99,887	43,280	461,045	3,741,372	6,597,406	56.71	1,219,781	1,212,574	98.64
Northeast	39,329	7,634,000	12,283,000	62.15	12,002	20,213	26,237	747,747	1,228,357	60.87	413,688	416,918	95.44
Northwest	86,981	56,859,000	88,165,000	64.49	284,490	170,430	388,938	6,294,732	10,298,043	61.13	1,558,897	1,570,139	98.13
Trans Pac.	12,569	1,598,000	4,311,000	37.07	1,161	211	6,957	133,551	372,730	35.83	153,977	136,912	99.90
TWA	244,059	184,317,000	246,530,000	74.76	900,594	732,852	1,675,340	20,940,956	30,898,679	67.77	5,082,821	5,035,147	99.40
United	323,149	218,001,000	285,584,000	76.34	1,808,303	1,029,660	2,650,035	26,377,573	42,846,648	61.56	6,480,565	6,436,585	98.91
Western	68,880	27,281,000	39,673,000	68.76	114,153	56,103	82,183	2,857,356	4,251,054	67.22	1,089,814	1,095,001	98.79
TOTALS	2,244,825	1,137,642,000	1,652,939,000	68.82	5,736,182	4,159,995	11,797,124	131,417,622	217,462,907	60.43	37,171,477	37,028,133	98.98
					Figures for Braniff Not Previously Reported								
Braniff(Sept)	115,917	38,944,000	61,869,000	62.95	149,281	100,851	245,193	4,220,838	7,496,629	56.30	1,850,567	1,839,935	98.86

* Includes air parcel post.

NOTE: Above figures include both scheduled and non-scheduled operations.

Local Service Revenues & Expenses for Quarter Ending Sept. 30, 1952

Airlines	Total Operating Revenues	Passenger Revenues	Mail Revenues	Express Revenues	Freight Revenues	Excess Baggage Revenues	Non-Scheduled Transport Rev.	Total Operating Expenses	Aircraft Operating Expenses	Ground & Indirect Expenses	Net Operating Income Before Income Taxes
All American	$ 934,275	$ 524,634	$ 369,540	$ 14,392	$ . . .	$ 2,981	$ 20,205	$ 1,005,082	$ 479,270	$ 525,812	$ -70,807
Bonanza	365,153	176,043	181,087	403	4,444	999	516	395,255	181,134	214,121	-30,102
Braniff*	121,752	91,994	26,260	1,397	1,535	310	. . .	121,466	54,013	67,453	286
Central	452,783	100,235	357,411	1,459	3,691	1,287	1,897	553,531	256,868	296,663	-100,748
Empire **	97,747	40,620	51,542	3,324	. . .	169	1,689	120,255	64,601	55,654	-22,509
Frontier	1,261,543	505,119	699,693	5,926	31,151	3,575	12,038	1,216,036	572,363	643,673	45,507
Lake Central	320,683	80,244	202,405	5,310	. . .	501	1,183	337,676	157,970	179,706	-16,993
MCA***	122,352	89,588	28,059	1,229	1,514	414	1,329	129,420	52,519	76,901	-7,068
Mohawk	709,288	357,424	318,612	6,704	5,331	1,041	16,945	567,362	297,463	269,899	141,926
Ozark	782,255	238,200	531,723	9,228	. . .	1,449	. . .	733,263	385,801	347,462	48,992
Piedmont	1,083,475	864,055	182,296	9,825	15,951	6,531	1,260	1,163,774	609,168	554,606	-80,299
Pioneer	1,182,703	768,402	377,791	3,400	17,753	6,455	2,268	1,387,128	786,888	600,240	-204,425
Southern	708,086	309,596	385,112	7,965	. . .	1,612	492	844,228	417,644	426,584	-136,142
Southwest	765,961	510,968	222,134	6,582	11,768	2,039	3,773	706,188	310,775	395,413	59,773
Trans-Texas	707,223	264,200	405,224	3,828	8,318	1,348	13,211	686,399	304,281	382,118	20,824
West Coast#	454,903	324,664	111,078	3,283	6,212	1,479	6,805	534,650	256,222	278,428	-79,747
Wiggins	81,722	7,069	71,764	714	. . .	13	1,896	77,858	30,591	47,267	3,864
Wis. Central	1,052,576	516,370	516,927	15,573	. . .	3,118	336	975,821	461,291	514,530	76,755
TOTALS	11,204,480	5,769,425	5,038,658	100,542	107,668	35,321	85,843	11,555,392	5,678,862	5,876,530	-350,913
					Helicopter Mail Service						
Hel. Air Service	142,115	. . . .	141,466	. . .	. . .	. . .	. . .	111,751	68,937	42,814	30,363
Los Angeles	135,716	. . . .	135,716	. . .	. . .	. . .	. . .	123,629	72,280	51,349	12,087

* Figures cover local service route 106 now operated by Braniff Airways as result of Braniff-Mid-Continent merger, effective August 16.
** Figures are for month of July. Empire-West Coast merger was effective August 4.
*** Figures are from July 1 to August 15 and cover operations of local service route 106. Braniff-MCA merger was effective August 16.
# Merger between West Coast Airlines and Empire Air Lines was effective August 4, 1952, West Coast being the surviving company.

Local Service Airline Traffic for Sept., 1952

Airlines	Revenue Passengers	Revenue Passenger Miles	Available Seat Miles	Passenger Load Factor %	Mail Ton Miles	Express Ton-Miles	Freight Ton-Miles	Total Ton-Miles Rev. Traffic	Available Ton-Miles Flown	% Available Ton-Miles Used	Revenue Plane-Miles	Scheduled Miles	% Scheduled Miles Completed
All American	18,898	2,700,000	5,984,000	45.11	5,432	10,374	. . .	273,513	683,916	39.99	284,965	278,038	97.83
Bonanza	4,400	1,039,000	2,845,000	36.51	2,131	1,662	3,169	106,191	376,590	28.20	135,464	136,090	99.54
Braniff*	5,380	958,000	1,961,000	48.85	1,599	2,226	4,118	99,204	196,063	50.60	81,693	81,840	99.82
Central	4,195	547,000	3,100,000	17.65	2,649	900	1,603	57,225	354,341	16.15	147,642	153,138	96.41
Frontier	12,061	3,272,000	8,253,000	39.65	8,806	5,365	35,401	362,041	786,076	46.06	394,879	391,020	99.03
Lake Central	2,911	462,000	1,611,000	28.68	1,044	4,593	979	48,677	184,830	26.34	77,173	75,960	99.23
Mohawk	12,856	2,340,000	5,142,000	45.51	3,549	5,381	4,948	227,578	521,631	43.63	214,235	191,400	99.30
Ozark	8,812	1,474,000	5,739,000	25.68	3,325	6,815	. . .	147,937	503,878	29.36	229,557	230,508	99.10
Piedmont	22,213	4,700,000	9,995,000	47.02	8,138	10,002	15,495	484,093	1,142,258	42.38	475,941	480,439	99.06
Pioneer	16,133	4,568,000	10,880,000	41.99	11,037	9,604	15,373	466,463	1,057,844	44.10	302,241	316,190	94.68
Southern	10,952	1,860,000	6,126,000	30.36	7,342	6,742	. . .	192,145	663,750	28.95	291,694	295,416	98.63
Southwest	16,479	3,186,000	5,259,000	60.58	8,324	3,979	9,839	326,154	532,761	61.22	250,440	252,436	98.07
Trans-Texas	7,195	1,652,000	4,938,000	33.47	5,127	2,232	5,462	170,351	564,350	30.19	235,146	231,480	99.88
West Coast**	13,488	2,249,000	4,817,000	46.69	2,438	2,129	3,552	212,205	508,719	41.71	229,372	233,289	98.13
Wiggins	348	31,000	148,000	20.95	117	239	. . .	3,177	15,830	20.07	39,254	46,384	80.00
Wis. Central	17,770	2,987,000	6,729,000	44.39	9,004	13,977	. . .	309,189	769,008	39.96	320,447	324,990	98.51
TOTALS	174,091	34,025,000	83,527,000	40.73	80,062	80,220	99,939	3,486,143	8,861,845	39.34	3,710,143	3,718,618	98.14
						Helicopter Mail Service							
HAS	. . .	. . . .	. . . .	. . .	2,567	. . .	. . .	2,567	7,036	36.48	34,901	34,901	100.00
Los Angeles	. . .	. . . .	. . . .	. . .	3,449	. . .	. . .	3,449	8,548	40.35	21,598	23,946	90.19

* Figures cover operations of local service route 106 now operated by Braniff Airways as result of Braniff-Mid-Continent merger, effective August 16, 1952.
** Merger between West Coast Airlines and Empire Air Lines was effective August 4, 1952, West Coast being the surviving company.

NOTE: Above figures include both scheduled and non-scheduled operations.

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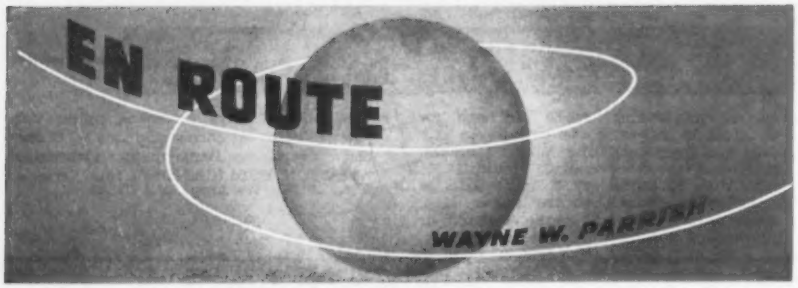

Heading South. You hop on board a Pan American Convair at Miami and take off at 9:20 a.m. and head southeast over the Caribbean toward the center of Cuba. You see the Florida keys stretching into the distance to the west and the brilliant blue water which always accompanies coral reefs, and in a little over an hour you put down at Camaguey in the sugar cane area and spend twenty minutes in the noisy terminal of Cuba's second largest city.

Off again to the south and in just a little over an hour you swing over Montego Bay and see the little town nestled at the foot of hills and mountains lush with green and you get a glimpse of Doctor's Cave beach, which is just about the finest in all the world, and then you are on the white coral runway of the airport that serves the northwestern part of the big island of Jamaica.

Even before the Convair door opens you know you're in the tropics. The sun blinds you as you walk down the steps and into the small white wooden terminal building. A Negro nurse in an immaculately clean uniform gives you a perfunctory health clearance. A Negro in white uniform and white sun helmet stamps your immigration papers. Uniformed and helmeted Negro customs inspectors don't bother to open your bags, but welcome you with smiles.

Warm Welcome. And there to meet you is mine host, **Matt Archibald**, who operates the new Montego Beach Hotel, and **Gerry Wynne**, British Overseas Airways' public relations director from New York, who is in Jamaica vacationing and who has heard of your arrival.

Before you know it, a cool Planter's Punch is placed in your hands, courtesy of the rum makers of Jamaica, and you wish you hadn't brought a hat and coat, and you are on your way to your hotel less than a mile away by a road that is lapped by the beautiful blue water of the Caribbean.

There is nothing quite so nice as an arrival by plane at Montego Bay, the gem of the British colony that is a gem in itself. Jamaica is one of the very few places in the world which live up to the extravagant claims made in travel literature. It is the finest winter spot near the United States. Cuba is brash, raucous, nerve-wracking. Nassau is sucker's bait—a first class racket. Bermuda is too far north for winter pleasure. Jamaica, and especially Montego Bay, has everything.

Under the Stars. Matt Archibald is an aviation veteran. He flew for Pan American for ten years. He got tired of reading about ocean-front hotel rooms and hotel luxuries which he was never able to get when he was on duty. So he designed the Montego Beach Hotel himself. Every room is an ocean-front room—every room has "everything" (—except bidets!). With some partners (who had more of the mazooma than he did) he has created a first class inn, just a year old now, which is the closest to "just right" that a hotel can be. And believe me, aviation folk are really welcome. If you want a complete rest, better be wary. Matt Archibald has aviation in his blood and he'll smother you with kindness and his favorite drink, White Sands, made of rum and English barley water whipped up into a cool creamy passport to paradise under the palm trees of the terrace open to the stars and moon at night.

Archibald says he still doesn't know anything about running a hotel, but don't let him kid you. Every guest gets a free Planter's Punch on arrival. There is no charge for umbrellas and reclining sun seats on the beach. A fleet of bicycles is available for the asking. You get a free trip in a glass-bottomed boat to see the coral and underwater life of the tropical seas.

Everything that's usually extra at a resort hotel is thrown in at the Montego Beach. And every room has its own private terrace overlooking the bay and you're encouraged to have breakfast there instead of going to the dining room.

Paradise. Climate? Where in all of this world can you have a dining room open to the sea 365 days out of the year? Comfortably, I mean. Swimming? How many places in the world can you see the sandy bottom twenty feet below the surface? Where can you stand with water up to your chin watching little yellow and black striped tropical fish nibble at your legs? And what is it that makes the moon and a bay and palm trees and shore lights seem just exactly like paradise?

Archibald has brought a new spirit and life into Montego Bay. He has the sort of hotel Americans like. He has created a good staff of native help and trained them well. His food is above the island average. My waiter was **Lawson** and a better and more courteous and efficient waiter I've never had. Of the staff of 200, all but a few are native Negro, descendants of the slaves brought to the island from Africa by the British long ago.

Jamaica is one of the most delightful and beautiful islands of the world, but it does have its economic and population problems. Of the population of about 1,300,000, 98% is Negro. The poverty problem is appalling—it is estimated that the average per capita income amounts to about $25 a year. Out of the 4,450 square miles, only about 650 are level. For an island that's only 148 miles long and 52 miles wide, it has a tough economy to overcome.

North Shore Best. Kingston on the south shore is an unattractive, humid, uninviting capital. The north shore is magnificent and more first class hotels are being erected each year. One of the best known is **Abe Issa**'s Tower Isle, but the screeching orchestra there would drive me to a nervous breakdown in two days; that isn't a rest home, that's a spectacle. But there are quite a few small and very fine hotels along the coast. Best spot of all is the Montego Bay area.

Amusement? You should hear the local calypso type of singing when a big rowboat full of singers pulls up to the pier in front of the hotel at night. Or the boys in dugout canoes who drink a kerosene mixture and then light it as they blow it out to create a terrific flare. Or the masqueraders who come to the hotels at holiday time and re-create a folk story that's been going the rounds of the island for a hundred years or more. Or you can cycle, or rent or hire a car (**Downer** and **Ernest** are fine drivers) and see the coastline, or drive into the hills and see the most lush vegetation you'll ever see anywhere on this globe.

Odd Names. The Jamaican Negro has very little of this world's goods but manages to keep pretty happy. When he talks to his own kind you can't understand a word he says, but all of them speak English with a British accent of their own making. They never say "yes" or "no," but always "*oh* yes" or "*oh* no."

There are lots of picturesque names on the island, such as Starve Gut Bay and villages called Wait-a-bit and God Almighty's Cut Stones.

Christopher Columbus discovered the island in 1494. For 146 years the Spanish ruled and managed to wipe out every single one of the Arawak Indians who lived there. Then the British grabbed the island, imported African slaves, and developed sugar cane and lots of other tropical products.

The white British colonials are not always blessed with imagination. They like life as it is, the easy way, with subservient natives, and a minimum of competition. But Jamaica would benefit by opening the island to unlimited air service to earn more dollars. And instead of closing every shop up tight on Sundays, the island would do well to keep them open and cater to visitors. This would mean more employment and more dollars.

Postscripts. **Richard Wright** of Hollywood, Calif., tells me I should have given the fine Scandia restaurant on Sunset Strip credit for the excellent in-flight meals on the SAS polar flight to Europe, instead of Skychef (December 22 issue). Sorry, I was misinformed, so all credit to Scandia.

And on the sad front, one of the Carlton Hotel cocktail lounge waiters described and pictured on this page in the November 10 issue has died. Cancer. His name: **Vincent Meola**, a fine guy.

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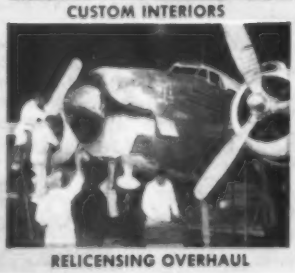

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News at Deadline

Delos Rentzel Leaves W. R. Grace & Co.

Delos W. Rentzel, former CAB chairman and Under Secretary of Commerce, is due to leave W. R. Grace & Co. at the end of this month. Rentzel, currently a vice president with Grace, has been with the firm since the beginning of 1952. He has not announced his future plans, but notes that he is leaving Grace "on the best of terms."

What had been described as a management shake-up in Grace is termed "more of a re-alignment of duties within the firm" by executive vice president Andrew B. Shea, current head of Pan American-Grace Airways.

Sapphire Power Up; New DH Jet Engine

The thrust rating of the Armstrong-Siddeley Sapphire may now be up to 10,000 pounds (dry) it has been learned; with water injection the total is most likely some 15,000 pounds. Most recent official figure is 8,300 pounds.

Development of an axial turbojet with a thrust of 15,000 pounds by the de Havilland Engine Co. Ltd. is reported. The engine would be the first departure from the centrifugal-flow engines that de Havilland has built in the past, the most recent of which was the Ghost.

Panair Buys Comets

Purchase of four de Havilland Comet II's has been announced by Panair do Brasil, with deliveries to start in 1954. The Brazilian flag carrier also has an option on two Comet III's. The order brings to 46 the number of Comets definitely sold, according to de Havilland, with "over one hundred more under discussion."

Boeing Missile Photos Released

First photographs of Boeing's GAPA research guided missile have been released, some three years after the missile went out of production. Believed to have been the forerunner of Boeing's XF-99 "Bowmarc" ground-to-air pilotless fighter, the GAPA was a two-stage weapon, about 25 feet long and a foot in diameter, with one set of stabilizers on the first stage and two on the second. It reached speeds of 1,500 mph. More than 100 were built and fired.

British, CAA to Discuss Comet Airworthiness

"Preliminary and informal" talks on Comet certification in the U.S. will begin this month, probably on January 26, with the arrival of a British Air Registration Board team of technicians, which will attempt to prove to the CAA the airworthiness of the Comet. The ARB's request for such a meeting was approved by the State Department.

The experts will adjourn to London at some stage of the discussion so that practical tests may be carried out.

Chance Vought Strike In Dallas Continues

A work stoppage by some 1,500 members of the United Auto Workers-CIO at Chance Vought Aircraft's AU-1, F7U, and F4U Corsair plant in Dallas, Texas, was reported still in effect at press time.

Bone of contention was a plastic shield which union members had begun to wear over their company badge. The shield, according to a UAW official, contained the local number and the request that, if the badge were found, it be dropped in a mail box for return to its proper owner. The company charged that the shield "alters the badge" and thus was a violation of security regulations.

New Airline Leases At N. Y. International

New leases signed by 25 airlines at New York International (Idlewild) Airport include agreements whereby after June of this year, the carriers will pay flight fees based on the cost of providing facilities, regardless of how often the operator uses the airport or whether the operator leases facilities at the airport.

Until June 30 the carriers will pay a flat fee of 15.44 cents per 1,000 pounds of maximum weight at take-off, a figure which will apply to the two-year period previous to that date. The Dewey Agreement, which was confirmed in the leases, had provided for the period from 1949 to June of 1951 by setting a figure of 13.22 cents per 1,000 pounds.

Also included in the new leases was a provision that the Port of New York Authority would build $33 million worth of hangars if the airlines request them in writing before the end of this year. Such hangars would be rented by the airlines for a 25-year period.

The Authority is also obliged to provide facilities for unloading and storage of gasoline at 5½ mills per gallon, with capacity for a 10-day supply for all airline lessees.

New Cessna Flies

Cessna Aircraft has announced the first flight of its new twin-engine model 310 (see page 65). Flight was described as successful.

A. V. Roe CF-100 Fighter Scheduled for Production

Production of the A. V. Roe CF-100 Mark 4 twin-jet fighter is scheduled for mid-1953, after completion of work on the Mark 3. Current supersonic tests on the Mark 4 are designed to prove that the CF-100 can withstand such speeds if it is necessary to dive in order to attack or escape. The prototype flew at supersonic speeds at 30,000 feet on December 18.

Air France Equipment Delivery Due Soon

Air France is about to implement its major re-equipment program. It will shortly receive its three de Havilland IA jetliners and will start scheduled services with them in Europe, the Middle East, and Far East in June. The first of 12 turboprop-powered Vickers Viscounts will be delivered in the early spring; these planes will fly short-range European routes currently operated with Douglas DC-4's. Later in 1953 Lockheed L-1049 Super Constellations will replace L-749 Connies on transoceanic routes.

Les Barnes Joins Allegheny Airlines

Leslie O. Barnes, executive director of the National Air Transport Coordinating Committee, has been named director of operations for Allegheny Airlines, formerly All-American Airways.

Prior to joining NATCC, Barnes was director of operations for the Air Transport Association, and before that he was associated with the CAA and American Airlines.

With the new appointment, effective February 1, Allegheny fills a post vacant since the resignation of Colin H. McIntosh and completes the reorganization of company personnel accompanying the division of the corporation into two separate companies—Allegheny Airlines and All American Engineering Co.

Ramspeck to Join EAL As Vice President

Robert Ramspeck, formerly executive vice president of the Air Transport Association and more recently chairman of the U. S. Civil Service Commission, joined Eastern Air Lines on January 15 as a vice president charged with handling federal and state government regulatory matters. He reports directly to E. V. Rickenbacker, president and general manager, and has his headquarters in EAL's offices in the Colorado Building at 14th and G Streets, N.W. in Washington.

Rickenbacker resigned as a director of the Air Transport Association and withdrew EAL's membership last June, when the ATA directors voted against further extending beyond June 30 the leave of absence that had been granted Ramspeck in 1951 when he accepted the Civil Service post at the request of President Truman. Eastern subsequently withdrew its resignation.

Japan Air Lines Plans Service

Service to the United States by Japan Air Lines is scheduled to begin in April or May, and service to Europe (via Hong Kong and Bankok) before the end of the year, according to Ryohei Itow, one of the carrier's managing directors.

Initial service on all overseas routes is to be performed with DC-6B's, but in 1955 de Havilland Comet II's will begin to serve Europe. A converted DC-6A (purchased from Slick Airways) and a DC-6 leased from another un-named airline will get JAL off to a start.

A bilateral air agreement has been concluded between Japan and the Netherlands, and negotiations are under way with the Brazilian government to speed inauguration of a route between Tokyo and that country via the U.S.

MSA Likes Mystere 4

The Dassault Mystere 4 has favorably impressed the Mutual Security Agency's Flight Test Evaluation Group, according to reports from Europe. If quantity production is decided upon, the first Mark 4 could be off the assembly lines before the end of 1954. Performance of the Mark 2 is said to have deteriorated following the installation of combat equipment, although it was at first accorded considerable enthusiasm.

French First Flights

First flights are scheduled for four French planes during this month: the Hurel Dubois HD 31 transport; the SNCA du Sud-Ouest SO-30, equipped with two ATAR turbojets; the SO 1120 helicopter; and the Morane Saulnier MS 755, a twin-jet primary trainer (see page 59). During 1952, 15 French prototypes made their first flights.

AOPA Protests Flight Over Inaugural Parade

The planned flight of 1,000 aircraft, including jets, above the inaugural parade has been opposed by the Aircraft Owners and Pilots Association. The AOPA asked CAA Administrator Charles F. Horne to revise the plan on the grounds that such flying would be "extremely hazardous."

Governmental and service groups involved denied that the operation as planned would be hazardous. A special control tower was constructed, special minimums put into effect, and civil aircraft warned to avoid the area during the parade and the rehearsals for it.

U.S. Flag Carrier Bill Introduced Again

Five bills affecting civil aviation have been introduced by Sen. Pat McCarran (D., Nev.), including one providing for the "merger and the consolidation of international air carriers for the U.S." (the so-called All American Flag Line bill).

Other bills included one which would create an independent Air Safety Board; one amending the Civil Aeronautics Act to provide for regulation of non-certificated air carriers and contract air carriers; one amending the Act to require Senate ratification of international air agreements; and one amending the Federal Airport Act to allow for a time extension during which claims might be made for reimbursement for damages to public airports as a result of military operations.

Comet III Suited for Trans-Atlantic Routes

The Comet III will have a range making it suitable for the trans-Atlantic trip, according to the de Havilland Aircraft Co. The company states that the range "is sufficient to ensure a high degree of regularity, with capacity payload and full reserves on the most critical westerly flight from London to New York with one intermediate stop."

With a gross weight of the jetliner at about 145,000 pounds, a payload of 17,450 pounds, and estimating a 50-mph headwind, the practical stage length would be 2,700 miles. Cruising speed would be about 500 mph.

Irregulars Claim Perfect Safety Record

Non-scheduled members of the Aircoach Transport Association went through 1952 with a perfect safety record, according to Amos E. Heacock, president of the group. This was achieved despite an increase in operations from one billion passenger-miles in 1951 to 1.3 billion last year. Heacock attributed considerable credit to the activities of the Aircraft Engineering Foundation, particularly in regard to C-46 aircraft.

New Fairchild Orders Total $44 Million

Fairchild Engine and Airplane Corp. received $44 million in new government contracts within a 15-day period recently, for work "of a highly classified nature," according to board chairman James A. Allis. The new contracts are related to jet engines and power plant components.

A long-term lease also has been signed by Fairchild for two buildings in the new industrial development at Roosevelt Field, Mineola, Long Island.

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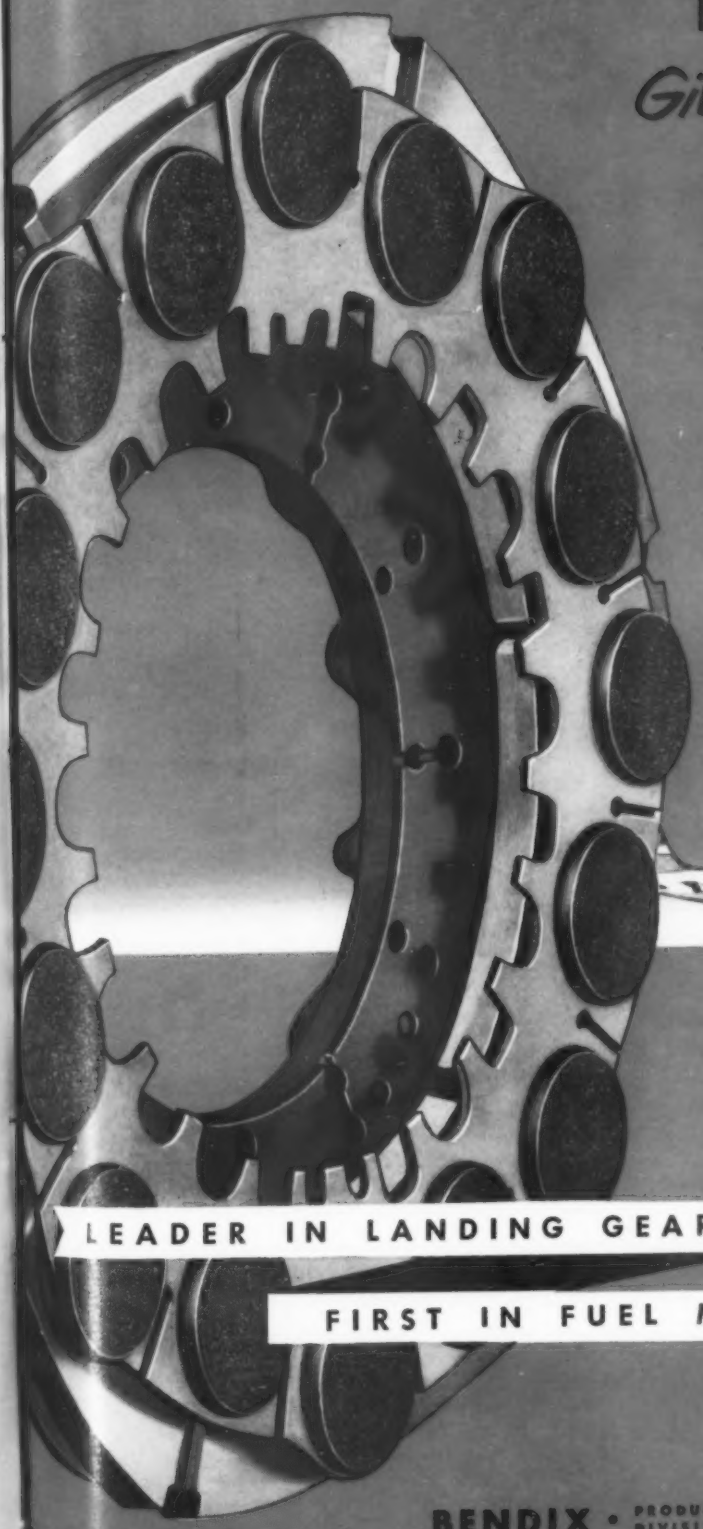

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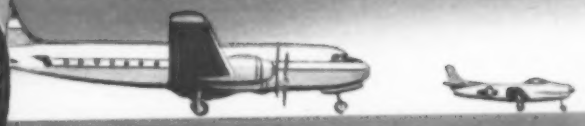

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